



# MAGAZINE

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CONTENTS

Breaking the Rules, by Sidney Rogerson . . . . .	258
Information Notes No. 78 . . . . .	264
Lady Lever Art Gallery, by G. G. Kirkpatrick . . . . .	269
In Norwegian Waters, by W. S. McLintock . . . . .	273
One Man and his Job—The Proof-reader . . . . .	276
I.C.I. News . . . . .	278
Attention! Audience at Large!! by Dorothy Thomas . . . . .	285

FRONT COVER: *The Lady Lever Art Gallery*

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BREAKING THE RULES

The Story of I.C.I.'s Company Advertising

By Sidney Rogerson (Publicity Controller)

The advertisement with the long informative copy under an illustration by a distinguished artist is accepted as familiar today. But in 1941 it marked a revolution in advertising practice. Here the calculations and motives behind the Company's successive campaigns.

THE prestige advertising of I.C.I. breaks almost all the rules of advertising practice, and it works to a different theory. It is that rare phenomenon—a freak idea that has succeeded.

The style of advertising with which we are familiar today—the long copy, dealing with some aspect of chemistry or of the chemical industry, under an illustration by some distinguished artist, and with no reference to I.C.I. other than the Company's symbol—marked a revolution in advertising practice when it first appeared in 1941.

The experts confidently predicted that no one would read them and queried what return I.C.I. could expect. Yet, by the end of the war, boys at public schools, industrialists and politicians were not only reading but collecting these advertisements. The editors of papers, who generally profess a mild contempt for the advertising side of their business, went out of their way to praise I.C.I.'s contribution, and other firms and corporations, not only in Great Britain but overseas, flattered I.C.I. by attempting to follow our advertising recipe.

To understand the story we must go back to the days before the last war, when I.C.I. was not concerned to advertise or explain itself, being content to remain the shadowy, distant colossus of the chemical industry and to advertise only the products that it made—and to advertise these merely to the industries which used them. A small-scale public opinion poll held shortly after the outbreak of war disclosed that the few people who were aware of I.C.I. at all thought of it as some sinister "merchant of death," manufacturing munitions of war for private gain. It would never do to allow such an impression to continue to deepen during the war years, and accordingly, when product advertising came temporarily to a stop, I obtained permission to spend some of the money so saved on advertising the nature of I.C.I. and the objects for which it was formed.

That I was allowed to do this was largely because I was able to plead national necessity: that the more Britain became cut off by the enemy from her former overseas markets, the more necessary it was for us to keep in touch with them by the export of ideas; that the German propaganda offensive was particularly successful in the scientific field; and that no one better than I.C.I. could be found to combat it. The enemy boast that Germany led the world in science and that Britain's inventiveness "died giving birth to the steam engine" could

THE RULES

(Publicity Controller)

for example be shown up for the lie it was by listing the achievements of British scientists since 1900.

There was no need, nor indeed any point, to concentrate on I.C.I. or to do any special pleading for the Company—I.C.I. would profit automatically because it was the biggest unit and the most successful in the British chemical industry.

This, indeed, is the theory to which I.C.I.'s prestige advertising works. If you wish, for example, to show the world how big or tall you are, the effective method is to distribute photos showing how favourably your height compares with that of a Shire horse or even an elephant. This is far more effective than publicising your actual measurements, since it enables the people to whom you are appealing to judge for themselves and acquits you of any charge of special pleading.

Another peculiarity of I.C.I.'s advertising is that it is issued in series, each based on a single theme and intended to achieve a set purpose. This enables a series, after appearing in the press at home and abroad, to be bound into booklet form and distributed to schools or other interested institutions—a possibility never envisaged at the start. This was one of the developments which followed success.

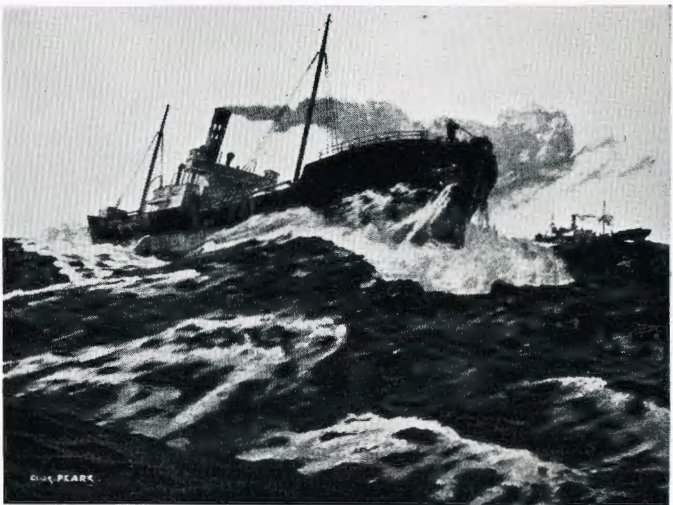
The first series, titled "Aspects of an Industry," was designed to show that of all the industries of a nation the chemical industry is the essential, more basic in its nature than coal, iron or steel. The series was an immediate success. Requests for reprints and copies were received from no fewer than 150 schools, ranging from Winchester College on one hand to a Borstal institution on the other. The number of requests from schools has increased year by year and about one thousand of them now receive reprints of advertisements.

"Aspects" was succeeded by "Services of an Industry," which carried the story of the chemical industry a stage further and showed how its processes or products affected the daily life of the citizen at every turn. This was very popular and ran for nearly two years.

Then a change was indicated. Despite their fundamental contribution to the national war effort, I.C.I. workers were not regarded as munition workers and applauded by the Ministry of Information as such. All the praise went to the girls and men who made aeroplanes, guns, shells and ships; there was none for those who produced the chemicals without which no article of war could be made at all.

So a fresh series was based on "Personnel of an Industry,"

COAL FROM NEWCASTLE



In the chain of delivery of coal from the pit face to the domestic hearth and factory furnace, not the least hazardous link is the collier. Honour to the seamen, from whatever port they may ply. Honour, too, to the great army of miners, working hundreds of feet below ground—often in discomfort, always in danger—denied the sunlight and the open air. Less recognised is the fundamental part which the British chemical industry plays in coal mining. Were it not for the chemist very little coal would be brought to the surface at an economic cost. Explosives are used in pit sinking, road making, ripping and brushing work, as well as in the actual coal-getting. Coal mines are of two kinds—"open light" mines, which are not dusty or gassy, in which either black powder or explosives may be used; and "safety lamp" mines in which it is compulsory to use only explosives known as "Permitteds", specially designed to prevent gas or dust from igniting. The range of these is so comprehensive that all types of stone and coal, hard or soft, may be adequately treated. "Permitted" explosives must always be fired by means of an electric detonator and their use is today made still safer by a sheathing consisting of a mixture which blankets and cools the gases arising in the shot-firing. British chemical research in explosives contributes not only to the ease and economy with which coal is produced, but to the safety and well-being of the men who work in coal mines.



ASPECTS OF AN INDUSTRY, the series which in 1941 set the pattern for all subsequent Company advertising

and with the help of Sir Kenneth Clark a team of distinguished artists was got together who went round our works painting the portraits of outstanding workers in the chief branches of the industry. These portraits were reproduced in our advertising together with particulars of the individual concerned and how his or her job contributed to the war effort.

It may be interesting to consider in detail just what these portraits achieved.

1. They brought some twenty prominent artists, some of





PORTRAITS OF AN INDUSTRY. In 1942 some twenty prominent artists were commissioned to paint portraits of I.C.I. employees. The originals were later exhibited at the Suffolk Galleries and elsewhere and came in for warm praise from the critics. This portrait by B. Fleetwood Walker, R.A., is of Mr. George Garner, who during the war looked after the Company's canal boats at Oldbury near Birmingham.

whom set out as highly mistrustful of Big Business, into touch with I.C.I. in the most natural and intimate way and made of them warm friends and even active propagandists.

2. They made a deep impression on the press, with the public and among our workpeople.
3. The originals of the portraits were framed and an exhibition of them was held at the R.B.A. Gallery in Suffolk Street. This exhibition received wide publicity and was attended by hundreds of distinguished visitors.
4. Arising out of it came requests from art schools and municipal art galleries to borrow the portraits for local exhibition. In this way they were shown as free advertisements for I.C.I. in London, Newcastle, Sheffield, Middlesbrough, Liverpool, Glasgow, Preston, Kilmarnock, Dundee, Forfar, Paisley, Arbroath, Widnes and Blackpool.
5. Coloured reproductions of the portraits were made into a book, 2000 copies of which were sent by Lord McGowan to the more prominent men in British national life, Cabinet

Ministers, head masters and others, and to leading scientists at home and abroad.

6. Finally, after the series had earned goodwill for I.C.I. for four years in one way and another, the framed portraits were officially presented to the sitters by their Divisional chairmen, thus rounding off the publicity with a personal gesture from the Company to the individuals who had co-operated in the effort.

Though "Personnel" was essentially a wartime series, it carried over into the period after VE day. It was then thought desirable to strike a fresh note and to reintroduce Great Britain, and I.C.I. in particular, to countries overseas. Accordingly preparations were made for an historical series pointing Britain's pre-eminence in the sciences by reference to men of British birth who had been world pioneers and pathfinders.

Meanwhile an interim series was put out which in appearance was a complete change from all that had been done up to date. Titled "Equipment of an Industry," it was illustrated photographically instead of by the work of a creative artist as all the others had been, and was designed to give schoolboys and students and science masters an idea of the equipment and apparatus used by the chemical industry to bridge the gulf between the laboratory test-tubes and the full-scale machinery and plant of commercial produc-

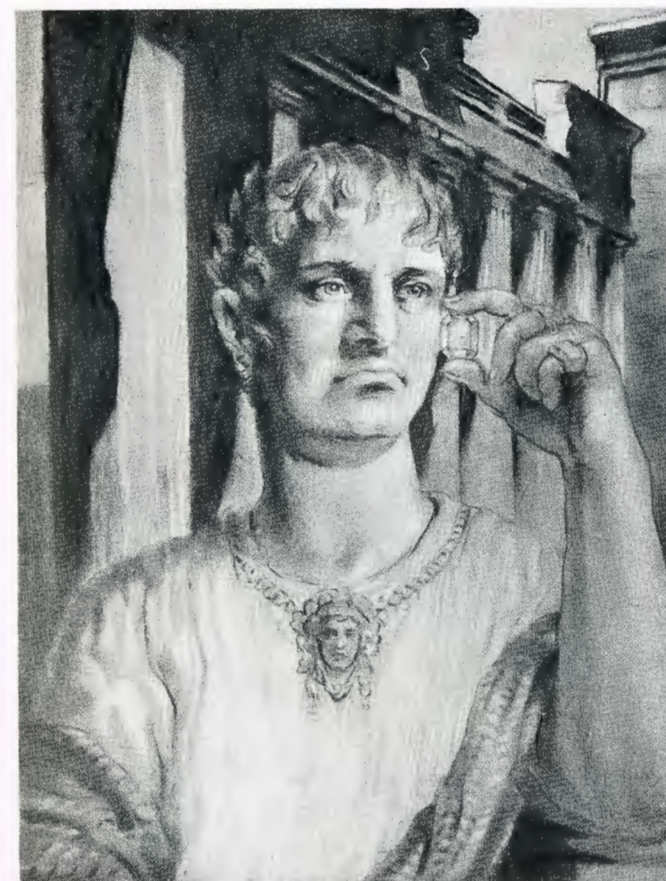
tion. This was hitherto unexplored territory, and the series had accordingly a more direct educational value than any of its predecessors and was popular with schools at home and abroad.

It was followed by the now famous historical series to which we gave the name "Ancestors of an Industry," underlining what the world owed to British genius in the sciences by the individual achievements of men from Robert of Chester and Roger Bacon down to Lord Rutherford.

As international trade opened up again, pressure was exerted for a commercial note to be included in the advertising. This was attempted in a series called "Achievements of an Industry," which recorded the scientific discoveries of I.C.I. itself. It was not so successful in Great Britain as earlier series, chiefly because it was a compromise, but it proved extremely popular overseas.

The next series reverted to the strictly objective, informational appeal. This was a description of the elements found in

## NERO'S EMERALD



The Roman Emperor Nero is said to have used a finely polished emerald as an eyeglass. In his day, aids to vision must have been rare and of doubtful efficiency, but today many of us would be lost without our glasses, and Industry needs a tremendous range of optical equipment, including microscopes, spectrophotometers, polarimeters, refractometers, photometers and pyrometers. Before World War I, hardly any equipment of this nature was made in Great Britain, but thanks to the energy and resource of British chemists, physicists and glass manufacturers, British optical glass is today the equal of that produced anywhere else in the world. In this development I.C.I. has played its part by providing soda ash of the exceptionally high standard of purity needed for the manufacture of modern optical instruments. Nor is this the whole story. It was I.C.I. chemists who, during the inter-war years, discovered the transparent acrylic plastic known by the trade name of 'Perspex'. This product has won world renown in the domes, gun turrets and "blisters" of fighting aircraft, and has increasing civilian uses—for example, lightweight, shatterproof ophthalmic lenses that are specially suitable for children and athletes. It would be too much to say that optical plastics will ever replace glass, but they do make it possible to manufacture optical components—as, for example, aspheric lenses—that could otherwise be made only at prohibitive expense.



SERVICES OF AN INDUSTRY. This series of I.C.I. advertisements was outstandingly successful and ran for longer than any other—in fact for over two years.

nature and of how the more important of them are used in the chemical industry, and was popular with schools—probably more popular than any series so far.

At this stage it was represented to Central Publicity Department that the Company advertising had done its job almost too well. It had put I.C.I. over to the man in the street, certainly, but by its indirectness and its insistence on the



Henry Deacon was an Englishman who, in 1868, found a new method of obtaining chlorine from hydrochloric acid gas, at that time a by-product of alkali manufacture. His method, known as the "Deacon Process", was eventually used all over the world. Side by side with another process, also invented by an English chemist, Deacon's invention made possible the commercial production of chlorine. This important heavy chemical is used in bleaching, for the manufacture of disinfectants, cleaning fluids and industrial solvents. Municipalities employ it for sterilising water supplies. Chlorine and its derivatives are essential to the chemical engineering and textile industries.

Deacon was born in London in 1822. His parents were extremely poor, but they were fortunate in enjoying the friendship of Michael Faraday. The great scientist took upon himself the supervision of the boy's brief education at a Quaker school in Tottenham. He left at the age of 14, and was apprenticed to an engineering firm, but soon afterwards it went bankrupt. He then moved to Lancashire, having his indentures transferred to Nasmyth and Gaskell, but at the age of 26 forsook engineering to become manager of Pilkington Brothers' glass-works at St. Helens. He abandoned glass a few years later when offered the managership of a small alkali works at Widnes. Subsequently he set up works of his own in partnership with William Pilkington and later with Gaskell—his former employers. He died of typhoid at the comparatively early age of 54.



ANCESTORS OF AN INDUSTRY—perhaps the most notable of all I.C.I. advertising campaigns. These advertisements, which were reprinted in book form, have come to be recognised almost as a short work of reference on prominent British scientists.

chemical industry it had identified the Company with the industry in such a manner that the public, or at least ill-disposed sections of it, might assume that I.C.I. was the British chemical industry.

On these grounds a drastic change was decided upon, and the series which began in April 1952 deals openly with I.C.I. but with an aspect of the Company which is not directly



commercial. The series, which is based on I.C.I.'s casebook of technical service, shows that only a big organisation can afford to maintain and operate a technical service on such a large scale for the benefit of other firms and industries. Enough advertisements are in hand to last for some eighteen months at the present rate of advertising.

In two main directions I.C.I.'s advertising differs from all others. First, it has always, with the exception of the "Achievements" series, aimed to be entirely factual and to attract and hold the reader by the inherent interest of the facts presented. It has never aroused suspicions that it was *ex parte* pleading or masked some commercial motive. The many copiers, in Great Britain and in U.S.A., have missed this essential. They have imitated the form and followed in many instances the copy, but have never been able to resist bringing in a commercial claim or piece of direct self-advertisement, thereby destroying the effect they were at pains and expense to achieve.

Secondly, I.C.I.'s advertising aims to make friends, not only with the distant publics to which it is primarily addressed, but with all who assist in its production and presentation, with the artists, the block-makers, and the papers who print it. This is well instanced in the "Personnel" series. So important is this in my opinion that I have always insisted in dealing personally direct with the artist himself and never through any agent of I.C.I. or of the artist. This direct contact tends to build up a personal relationship which would be impossible otherwise.

By aiming to make the advertisements so aesthetically attractive and interesting to read that they are an adornment to the editorial columns of the paper we have made friends, too, with the editorial staffs of the papers, traditionally unsympathetic to advertising and advertisers. The editor of one well-known London paper once admitted that almost the first

thing he read in his own paper was the I.C.I. advertisement.

The acid test of advertising is whether it has been successful, but, though there is general agreement that I.C.I. has been successful, it is more difficult to adduce positive evidence of it. This is not unnatural, for advertising of this character must essentially be largely a matter of faith.

One starts it in the belief that it is a wise or desirable move and continues it in the same faith. If evidence that it is doing good comes to light, so much the better. If it does not, then there must be no cessation of the advertising. Such action

would invite dangerous reactions. I admit that I have been lucky to be backed by so liberal-minded a board of directors, who not only gave me the original permission to take so important a step into uncharted territory but have supported me, with little confirmatory evidence to guide them, ever since. Few firms, in my opinion, would have done as much.

Yet there are some pieces of reliable evidence—overseas, for example. When we began our prestige advertising Spain was at its most pro-German stage, yet through the influence of the Madrid office the I.C.I. advertisements got into Spanish papers which would not accept even the B.B.C. time signal. We know that their appearance created such an impression that the German I.G. Farbenindustrie held an emergency meeting in Berlin

and decided to try to counter this British propaganda by advertising of their own. Their efforts, being hastily produced, were poor and did the German cause more harm than good by inviting the Spaniards to contrast the German with the British model.

There is also the evidence of the advertising's fan mail, which would gladden the heart of any minor film star. Letters of praise or commendation or interest are received from all over the world, and requests for reprints come from schools

## MURDER BY HORMONES

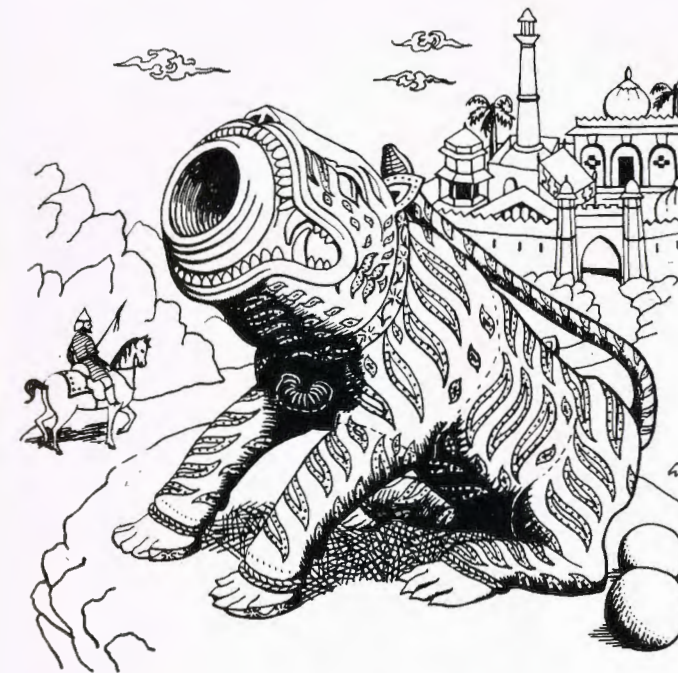
'Methoxone' is the proprietary name given to the sodium salt of 4-chlor-2-methyl-phenoxyacetic acid. Its development at the Jealott's Hill Research Station of I.C.I. marked a revolution in the technique of weedkilling. 'Methoxone' represents the achievement of agricultural scientists probing the mysteries of plant growth. Growth in plants, as in animals, is controlled by minute secretions known as hormones. These are complex substances, but physiologists are now able to isolate them and to produce similar compounds artificially. In 1940 the Jealott's Hill biologists discovered that certain concentrations of plant hormones could hinder as well as assist growth. Some plants were more affected than others, and as many weeds of cornland were among these, it was at once seen that hormones held the possibility of selective weedkilling. The next step was to find a synthetic hormone with the maximum effect in retarding growth. Drs. W. G. Templeman and W. A. Sexton of I.C.I. undertook the necessary research. Of the many compounds which they produced and examined, 'Methoxone' gave greatest promise, and in nation-wide field trials, their laboratory results were amply confirmed.

Today, 'Methoxone' preparations, under the trade name 'Agroxone', can be obtained by farmers everywhere. Thus the age-old problem of the wheat and the tares has been brought a noteworthy step nearer solution.



ACHIEVEMENTS OF AN INDUSTRY—a series which attracted great attention overseas, where it helped to dispel the myth of German superiority in chemical discovery

## COPPER



NEXT to iron, copper is the most useful metal in the world today.

Millions of miles of copper wire and cable carry the electricity that drives motors and transmits messages from one end of the earth to the other. It is made into fireboxes for railway engines and, alloyed with zinc or nickel, into condenser tubes for steam generators in power houses and ships. Alloyed with zinc, copper forms brass, which has a thousand uses from curtain rails to cartridge cases. Alloyed with tin, copper becomes bronze, the alloy that makes springs, statues and heavy duty bearings. Copper was the first metal used by primitive man as he emerged from the Stone Age. When the Romans came to Britain, copper was already being widely used in the form of bronze. Mining and smelting were being carried out in Cumberland, Anglesey and North Wales. Today most of the world's copper ore is mined in Africa and the Americas.

I.C.I., which is the largest producer of wrought non-ferrous metals in the British Empire, manufactures vast quantities of copper and copper alloys in forms varying from printing rollers to coins.



ELEMENTS OF AN INDUSTRY. Like the Ancestors this series won immense prestige, and bound sets of reprints afford a brief summary of the industrial importance of those elements in common use.

throughout the British Isles. There is also the evidence of those famous firms who are imitators. Finally, there is the evidence of those who come to I.C.I.'s Publicity Department even from as far away as Australia to seek advice on how to apply the same sort of advertising to their own problems.

In conclusion I should like to put on record my gratitude to

## QUICK TURN ROUND



THE S.S. "Eumaeus" rammed the quay at Hongkong and stove in her bows. The hole was filled in with concrete and in this state she steamed back to Glasgow to be repaired in the Barclay Curle & Company shipyard. The first step in the repair was, obviously, to dislodge the concrete. It could be chipped out—all 4 tons of it—a few pounds at a time with road drills, crowbars and chisels. But at this point I.C.I. was asked to remove it with explosives. Though it is easy enough to break up concrete by this means, it was more difficult to find a way of blasting without at the same time damaging either the rest of the ship, the nearby ships in the yard, or the adjoining property. The technical service department of I.C.I.'s Nobel Division, drawing on 80 years' experience of explosives, knew the answer.

The concrete was removed safely, and the S.S. "Eumaeus" was back in service in a comparatively short time.



I.C.I. TECHNICAL SERVICE, the current Company advertising campaign. Each of these advertisements describes the case-history of an actual technical service job done by the Company.

those who have helped to make these advertisements successful. I would name E. J. McNaughton, who gave invaluable support in the early days, and Mr. Le Neve Foster, to whom since 1943 has fallen the responsibility for extracting the information, for drafting the copy and frequently for selecting the artist.



# Information Notes

## IN KENYA TODAY

By A. E. Gawler (Deputy Overseas Controller)

*That Kenya is a country with a future no one doubts. But there are still many problems to be faced, and here Mr. A. E. Gawler, recently returned from Kenya, where he visited the Magadi Soda Company, of which he is chairman, gives a brief sketch of the situation today.*

THE population of Kenya Colony (according to the 1948 census) is 5.4 million. This comprises 5½ million Africans; nearly 30,000 Europeans; and Asians, Arabs and other races to a total of 150,000. It is therefore a plural society which must, sooner or later, effect a reconciliation of the interests of the immigrant races with those of the native population if the government and administration are to be carried on in friendly co-operation.

What these interests may be is a problem in itself and is not the purpose of this article to discuss. Suffice it to say that although the White settlement has justified itself by what it has already done for the Africans, and although its disappearance would be to anything but to their advantage, it has given them an acquaintance with Western ways of life and thought more quickly than could otherwise have been the case. That a desire should have been aroused among the Africans for a larger share in the supposed advantages is therefore not surprising. On the other hand, there is not sufficient realisation of the fact that the capacity for work by brain and hand has to be developed before the rewards can be claimed.

The answer to this and other problems is for those directly concerned to work out. It is at least certain that the one thing they will not be short of is advice.

Agricultural, dairy and forest products and plantation crops such as sisal, coffee, tea and wattle are the main products of Kenya Colony. There is no up-to-date census of industrial production, though one is to be issued shortly, but there appears to be still no tendency to develop heavy industry on any important scale. The Magadi Soda Company remains the largest single industrial entity in East Africa.

On the other hand, good prices have been obtained for crop products in recent years, and the resultant prosperity has led to a considerable expansion of secondary industries and of those providing services of various kinds. Light engineering, woodworking and soap-making concerns, and canneries, for example, now exist in considerable numbers; while capital, most of it British, is still entering the Colony at the rate of about £15 million per annum.

The external trade balance of Kenya alone has shown an increasing surplus of imports over exports in recent years, but

(Photos: East African Office)



*Upland pasture in Kenya*



*A typical farmhouse constructed of wood*

the export surpluses of Tanganyika and Uganda are substantial; as all these are in the same currency area the trade balance for the area remains favourable.

Of the domestic economic problems the most difficult continues to be the inadequate capacity of the East African railway system and the congestion at the ports. These problems have been chronic for a considerable time; but since the war, owing to the rapid expansion in the economies of all three territories, the deficiencies have become acute.

In the case of the railway this is not due so much to any failure on the part of the authorities to foresee future requirements as that owing to the rapid increase in prices in recent years, particularly of steel, sums budgeted for a given programme have when the time came been insufficient to buy the number of units planned. The result has been that actual deliveries have been consistently short of anticipated requirements.

Shortage of locomotives and rolling stock on the railways is a contributory factor to the congestion in the ports, but no less important a cause is the shortage of berths for ships and of storage facilities ashore. Harbour extensions are usually major civil engineering works and thus require time and heavy capital expenditure, but plans are in hand which should ease the position, particularly in Mombasa, in three or four years' time.

Meanwhile lack of warehouse accommodation combined with slowness of movement by rail creates a tendency to use

transit sheds as stores. This, of course, adds further to the congestion, and the provision of a great deal more covered storage accommodation must be a necessary part of any scheme of port development.

In 1948 I recorded in the *Magazine* my impression that, contrary to what was sometimes believed in Britain, Kenyans as a whole led an active, purposeful and hard-working existence. This is still the case, and to balance what I have said earlier about their difficulties I can also testify that to people coming out from Britain Kenya is certainly not only a delightful country to visit but one in which the welcome accorded is at least as warm and cordial as the colonial tradition ever produced elsewhere.

It is, however, not a country to which intending immigrants should go without careful enquiry. There is room on the land and there is room for the development of further industries, mainly those not requiring large local resources; but some professions and the retail trade are at least comfortably full, if not overcrowded. European stenographers (good ones) are at a premium, but clerical posts are in the main held by Asians and Africans.

Nevertheless, anyone who has anything to contribute in money, skill or ability can still find a place, but he would be advised to make every possible enquiry—including (if he can afford it) a preliminary visit to the country—before finally committing himself to a new life in a new land with a lot of problems and yet many delights peculiarly its own.

## THE DOORS OF IMPERIAL CHEMICAL HOUSE

By A. F. Nicklin (Salt Division)

*The great doors of Imperial Chemical House with their beautiful sculptured relief can claim to be among the masterpieces of the world. They were made by the small firm of Bromsgrove Guild Ltd., near the Stoke Works of Salt Division. Here is the story of their design and execution.*

WORKS Council business had taken my manager, Mr. H. Ward, and myself to Liverpool. We had dined very late and—if I remember rightly—not too well. We sat smoking. Suddenly my companion said "Let's take a stroll; it's too early to turn in."

It was obvious that my meagre knowledge of Liverpool would remain so. Buildings and streets were shrouded in impenetrable fog. Near the docks wraithlike, nebulous creatures stood conversing in cones of luminous mist pendant from invisible lamp standards. Footsteps sounded hollow and muted in the deserted streets.

We turned back towards the hotel. "Confound this fog!" Mr. Ward murmured. "If we could only see it, here is the Royal Liver Building. On top of it are two enormous birds in art metalwork. And this will surprise you," he added almost confidentially: "they were made by Bromsgrove Guild Ltd.!"

Back in the hotel we talked of the many famous examples of fine metalwork executed by this small firm near the Stoke works of Salt Division. For instance the Great Gates of Canada and the Australian Screens which form part of the Queen Victoria Memorial; the cast bronze doors at the Bank of England; the Royal Bank of Canada; and the whole of the

metalwork in Australia House and the gates of Buckingham Palace were done at Bromsgrove. We were just going to bed when Mr. Ward said "By jove, we've forgotten their masterpiece!" I asked what it was. "Why, the doors of Imperial Chemical House. The most wonderful doors in the world!"

Some months later I met Mr. G. W. Whewell, the director of Bromsgrove Guild Ltd. I had been waiting eagerly for this moment. Mr. Whewell began "As you have seen the doors I need not . . ." "But we haven't!" I protested. "In that case I'll begin at the beginning." As one who only admires beautiful things without the slightest knowledge as to how they are conceived, designed and made I thought this was a good idea. I said so. This was Mr. Whewell's story.

"The doors were designed by Sir Frank Baines, the architect of Imperial Chemical House. Doubtless he conceived the idea from his knowledge of the famous fourteenth-century bronze doors of the Baptistery in Florence.

"Lorenzo Ghiberti laboured on them for thirty years. But the design of Ghiberti's hitherto unrivalled masterpiece was simple compared to the design conceived by Sir Frank. Ghiberti's lovely panels represent various Biblical episodes. They have a definite similarity in design and grouping. But



in our doors the subject of each panel is of an essentially different character. Each panel makes a unique contribution to an artistic survey of man's evolution through the application of science to industry. In their setting they form a series of modelled panels without equal in the whole world. Frankly, they are incomparable."

The speaker stopped to light a cigarette. Mr. Ward asked "I imagine these doors must be really large ones?" "Large?" continued Mr. Whewell. "They are gigantic! Just look at these photographs. The doors are 20 ft. high and 10 ft. wide. Each of the all-metal leaves weighs two and a half tons. They are faced back and front with silveroid—a nickel-copper alloy with a beautiful silvery appearance. It is hard, permanent under wear and resistant to atmospheric attack."

"Surely," I interrupted, "it is difficult to open and close such massive doors?" "Manually, it would be," continued Mr. Whewell. "But they are operated by an electromagnetic device, controlled by a push-button inside one of the great leaves. They become stationary immediately pressure is relaxed."

I was looking at the photographs. Much as I admired the general effect, my eye was continually drawn to the detailed beauty of the panels. I remarked how boldly the pictures stood out from the background.

"That is due to the artistry of the sculptor, the late Mr. W. B. Fagan," said Mr. Whewell. "It is a tribute to his genius that the modelling suggests such high relief when he had but a very restricted depth at his command. Before Mr. Fagan could start on the job of clay modelling an enormous amount of preliminary work had to be done. Hundreds of sketch cartoons were drawn. Much of the data was supplied by the Royal Institution, and Sir William Bragg gave invaluable

assistance. In fact nothing was left undone to ensure the accuracy of all the detail depicted. As an example of this, look at this panel of Faraday lecturing to the fellows of the Royal Institution. Among the figures depicted are actual portraits of Tyndal, Huxley, Brewster, Kelvin, Darwin, Wheatstone, Frankland and—oh—a number of others. The equipment was modelled from Faraday's own drawings."



*The main doorway of Imperial Chemical House, London*

"But tell us about your part of the job—the moulding and founding," I asked.

"I'll try," he conceded, "but the process is difficult for a layman to understand. Mr. Fagan's clay models were first cast in reversed gelatine. Then came 'piece moulding' in plaster—a complicated and intricate job demanding the highest skill in the plasterer's craft. But the ordinary sand moulding would not have produced the very smooth surface required, so the rarely used and very difficult *cire perdue*, or lost wax, process was employed. This is too technical to explain. Briefly

but shortly, it produces a surface which requires very little finishing."

Mr. Ward then said "But surely you must be very proud of your own and your craftsmen's contribution to the production of this superlative work?"

"Well, we were satisfied," replied Mr. Whewell modestly. Then as an afterthought he added "But in a work of this kind satisfaction and pride are synonymous terms, I suppose; but you, indeed everyone in I.C.I., must be proud of these doors—a far greater pride than that of mere possession."

## A NEW USE FOR PENICILLIN

By T. W. Groves (Pharmaceuticals Division)

*By an accident of research penicillin has been found to be a valuable addition to the rations of young poultry and pigs. Very small quantities will promote growth, especially in the case of stunted development or deficient diet. Here a pharmaceuticals expert explains how this discovery was made and just what its significance is.*

LIKE penicillin itself, the value of an antibiotic drug in animal rations was an accidental discovery. In 1946 a group of scientists was engaged on working out the vitamin requirements of growing chicks. They knew quite well that the bacteria normally present in the intestine of chicks themselves produced certain vitamins. As these scientists were interested in the quantities of vitamin required by poultry, the "home-produced" vitamins confused the experimental results. If it were possible to "sterilise" the bowel by a non-poisonous antibacterial substance, then experiments could be conducted in a straightforward way without the necessity of making complicated and probably inaccurate guesses.

By mixing streptomycin in the chick rations the scientists were able to reduce the bacterial population of the chicks to only a slight degree, but to their surprise the chicks on the streptomycin ration grew faster than other birds which were receiving all the known vitamin requirements added to their basic diet. As, however, very large quantities, relatively, of streptomycin were added to the special ration, the increase in growth rate was not considered to have practical importance.

It was not until some four years later that this growth-promoting effect of antibiotics was studied. In addition to streptomycin, bacitracin, terramycin, aureomycin and penicillin were also tested in this way. Many hundreds of experiments, mainly in America and Canada, were conducted, and although at first the picture was confused, and wild and exaggerated claims were made for this new use of antibiotics, the weight of accumulated evidence showed that a strong case could be made out for accepting this peculiar property of these drugs.

Young animals in the phase of rapid growth respond best to "fortified" diets. As soon as normal growth rate slows, then even large quantities of antibiotic have little or no effect.

Injection of the drugs probably has no effect; they must be given by the mouth. Very small quantities only are required—taking average figures, two-thirds of an ounce of procaine penicillin added to one ton of prepared ration can put up the rate of chick growth as much as 20%. This means that one ounce

a day of the antibiotic suffices for about 50,000 chicks a week old. Similar effects are gained in pigs and turkeys.

With antibiotic feeding one does not get giant animals, but merely animals which grow faster than those receiving normal rations. In almost every litter of pigs one or two will be born undersized compared with the rest of the family. There are many local names for these weaklings—runts, cades, niscels—but wherever they occur they are usually a very poor proposition to the farmer, always lagging behind and often never catching up on their litter mates. Penicillin or aureomycin helps these pigs more than the bigger ones. In fact, the more handicapped by nature and man in the way of size, poor-quality rations and bad husbandry, the better response animals show to the diet.

The obverse of this was strikingly demonstrated in chicks, and the experiment has been repeated using pigs. Chicks from healthy stock hens, reared under ideal conditions of diet and management, showed no growth rate response to antibiotic feeding over control chicks reared alongside them and having no antibiotic.

As yet no one knows how these drugs exert their effect. Penicillin and aureomycin head the field for efficiency; but doubts as to the wisdom of starting the general use of antibiotics in animal rations have been cast in this country, chiefly on the grounds that "drug-fastness" may ensue.

Drug-fastness means that organisms may become adapted to the lethal effects of, say, penicillin and may possibly evolve strains of bacteria that will thrive in the presence of the drug, thus overcoming one of the most potent weapons in the veterinary surgeon's armoury. Experiments in progress at the Ministry of Agriculture and Fisheries Animal Research Station are examining this possibility.

The Penicillin Act forbids the sale of penicillin except on prescription, and unless and until the Ministry veterinary surgeons are satisfied as to the safety and desirability of the remarkable properties of penicillin in animal rations, no "fortification" by feedstuffs manufacturers of their products is allowed.



## THERMETRIC COLOURS

(Contributed by Dyestuffs Division)

*A new way of recording changes in temperature is by the use of special pigments each of which changes to another colour at a different temperature. Painted in stripes, for example on the piston of an engine, 'Thermetric' Colours will give a record of the temperature reached by a piston during actual running. Here a Dyestuffs Division expert explains this new development.*

IT is often necessary to measure the temperatures reached by objects during manufacture or by machine parts actually in operation. The methods of doing so are liable to be elaborate, calling for sensitive and delicate apparatus, and often cannot be used where the object is difficult to get at or where the machine part is in continuous movement.

To overcome these difficulties Dyestuffs Division has introduced a series of pigments capable of changing colour at certain specified temperatures. Many of the colour changes are permanent, and so provide a permanent record of the temperature reached, which can be inspected at leisure. The pigments, known as 'Thermetric' Colours, are in liquid form and possess good adhesive qualities. They are applied in a thin film by brush or spray, and dry rapidly.

After being painted with one or more 'Thermetric' Colours the object under examination is subjected for a definite length of time—usually 30 or 60 minutes—to the heating conditions being investigated. Thus, in the case of an engine piston or bearing the component is painted, replaced, and the engine run for the prescribed period, after which the engine is dismantled and the component examined.

If the temperature has reached or exceeded the values corresponding to the 'Thermetric' Colours used, the colours will have changed accordingly; otherwise they will be unchanged.

The temperature at which any given 'Thermetric' Colour changes depends to some extent on the length of time of heating. A 'Thermetric' Colour which changes from pink to blue at 150° C. after 30 minutes' heating may also change at only 140° C. if the heating is prolonged for five hours. Similarly, if the heating lasts for only two minutes a temperature of 190° C. may be required to cause the change of colour in such a short time.

'Thermetric' Colours are divided into three classes: single-change colours, double-change colours, and multi-change colours. The single-change colour P, for example, changes from grey-blue to olive-green after being heated to 80° C. for 30 minutes; another single-change colour, H, changes from purple to fawn after being heated to 420° C. for 30 minutes, or to 400° C. for 60 minutes.

Double-change colours show one change at a low temperature, reverting to the original colour on cooling in a normal moist atmosphere, and undergo a second, permanent, change at a much higher temperature. 'Thermetric' Colour X, for

example, is pink, and changes to purple if heated to 85° C. for 30 minutes. If heated to 180° C. for 30 minutes, however, it turns to brown.

Multi-change colours show successive changes as the temperature increases. Although these changes are not quite as sharp as those exhibited by the single- or double-change colours, they are specially useful for mapping out zones of different temperatures, and also serve as a guide to the selection of the appropriate single-change colours where the temperature to be measured is quite unknown. To give one example, the multi-change colour HD changes in succession from pink to lilac, from lilac to light grey, and from light grey to slate-grey—indicating temperatures of 115°, 300° and 620° C.

A typical application of 'Thermetric' Colours would be in finding the temperature reached by the piston of an aircraft engine during actual operation. Stripes of three different single-change 'Thermetric' Colours, yellow, dark blue, and black, would be applied to the under surface of the piston and the engine run for 60 minutes. After cooling the piston would be examined, and it might be found that while changes had taken place in the colours of two of the stripes the third colour would be unchanged. The temperature reached by the piston would thus be shown to have been greater than 260° C. but less than 300° C.

Other typical uses of 'Thermetric' Colours are in the heat-treatment of metals and in the pre-heating of thick metal in welding. They are not suitable for permanent application to pipes or engine parts in order to give warning of overheating, because the colours will change at temperatures well below their calibration points if they are heated for a sufficiently long period. Users are also warned that many 'Thermetric' Colours which accurately indicate temperatures at atmospheric pressure may not do so under vacuum, and that a stream of hot air, steam or chemical vapour

may influence the colour changes. A few preliminary experiments are often necessary to find out exactly what influence such conditions will have.

Although 'Thermetric' Colours provide a method of estimating temperature with an accuracy of about 5% and are specially useful under conditions where other methods are impracticable, they are intended primarily as a valuable research tool rather than as a means of measuring temperatures with great accuracy.



... colour changes



... pink turns to brown

## Lady Lever Art Gallery

by G. G. Kirkpatrick

Some thirty minutes by train from Liverpool, and within visiting range of so many of the I.C.I. works, is the remarkable Lady Lever Art Gallery of Port Sunlight. With its happy mixture of pictures, furniture, carpets and porcelain, this is a model of what an art gallery can be, and it displays its treasures in the atmosphere of a luxurious and elegantly furnished home.

IT is Saturday, 16th December, 1922. Princess Beatrice with a ceremonial key has just formally opened the Lady Lever Art Gallery. A large and distinguished company escape from a grey afternoon to the glowing warmth and colour of the Main Hall of this new Palace of Art.

William Hesketh Lever, the first Viscount Leverhulme, founder of Port Sunlight and the soap firm which took his name, is speaking:

In the extreme north-west corner of this building are a pair of figures which were in a little house in Upper Dickinson Street, Wigan, where I lived forty years ago. They were over the mantelpiece, and I do not think that they need be ashamed of the company of costly works of art they are in today, nor do I think the costly works of art need be ashamed of them. They are true emblems of British art of about a century and a half ago, and I think they are second to none. They were very inexpensive, and they were one of the earliest steps I took in the way of collection.

If the visitor today, thirty years afterwards, will bear to the right of the Main Hall he will come to Room 22. It is given over to masters of the water-colour school, in which English artists led Western Europe and the world. Here is the *Peace and War* which David Cox painted in 1846. A shepherd with his flock, two peasants and a child, high over Romney Marsh, are watching a regiment of infantry marching downhill behind the field guns. Here are drawings by William Henry Hunt (1790-1864), who was a cripple from birth and could move



The entrance to the Art Gallery at Port Sunlight

only with difficulty, and so turned his gifts to what lay near at hand. His still-life work has never been surpassed in fidelity to nature. Such fidelity is not today fashionable, but for the open and generous eye it gives a delight like that of finding the first violets at one's feet—it "blesses us with surprise."

The furniture in Room 22 is mostly of inlaid satinwood of the second half of the eighteenth century. A round elbow chair of whale-bone enriched with black and gold lacquer once belonged to Warren Hastings, first Governor-General of India. (Wander where one will in the Gallery, history keeps breaking in, be it by way of a State bed made for Queen Anne, or Ford Madox Brown's painting, *Cromwell on his Farm, St. Ives*, 1630, or the death mask of Napoleon.)

And on a high mantelpiece will be found, one at each corner, the pair of Derby biscuit figures which young Lever bought in 1877: *The Shepherd* by William J. Coffee, *The Shepherdess* by Pierre Stephan. Beneath, in an enlarged photograph, these two pieces are shown in the modest, rather overcrowded parlour of the house in Wigan which Lever and his wife occupied when he was still a wholesale grocer, before he dreamed the dream that led to soap and to close business relations with Brunner, Mond & Co.

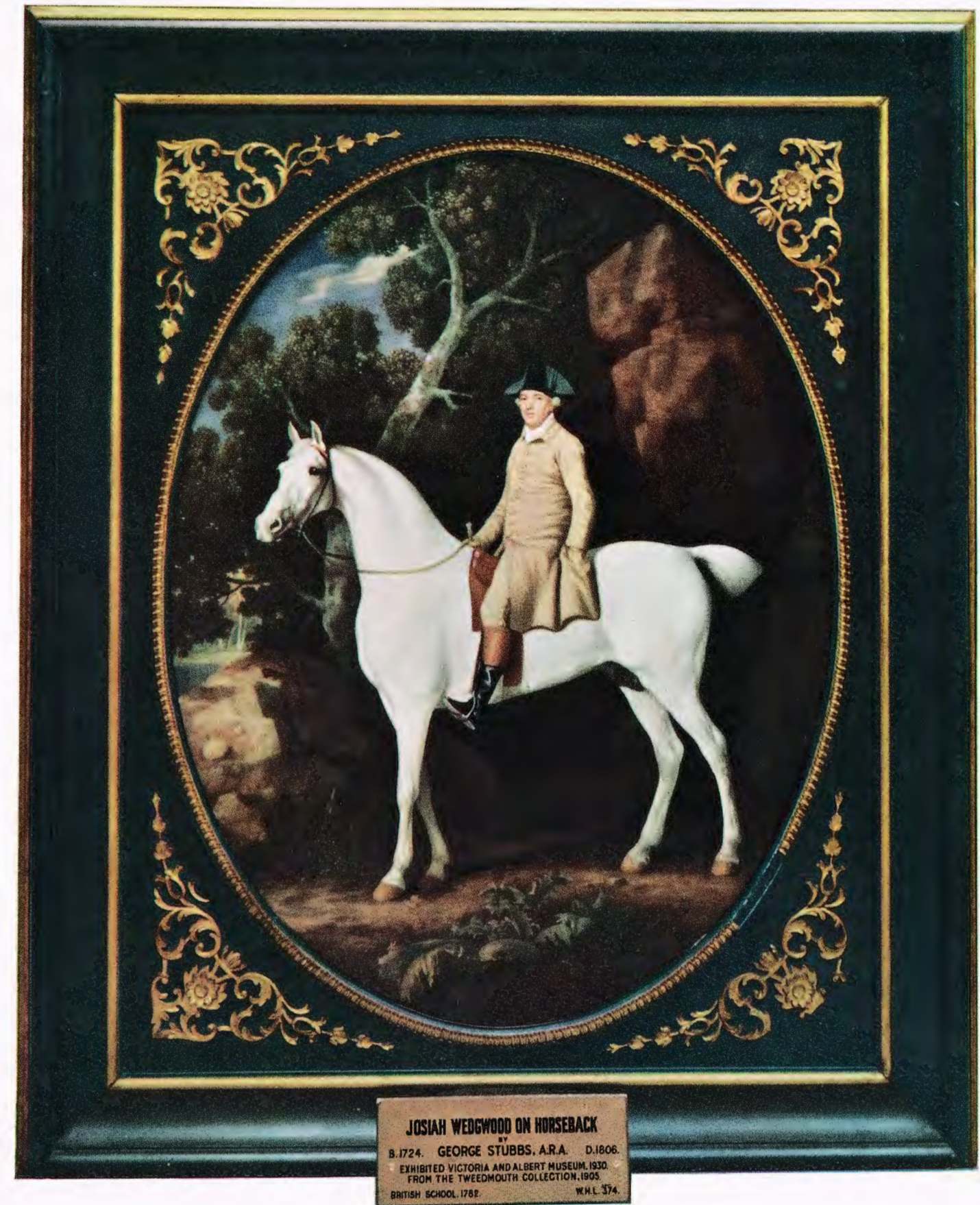
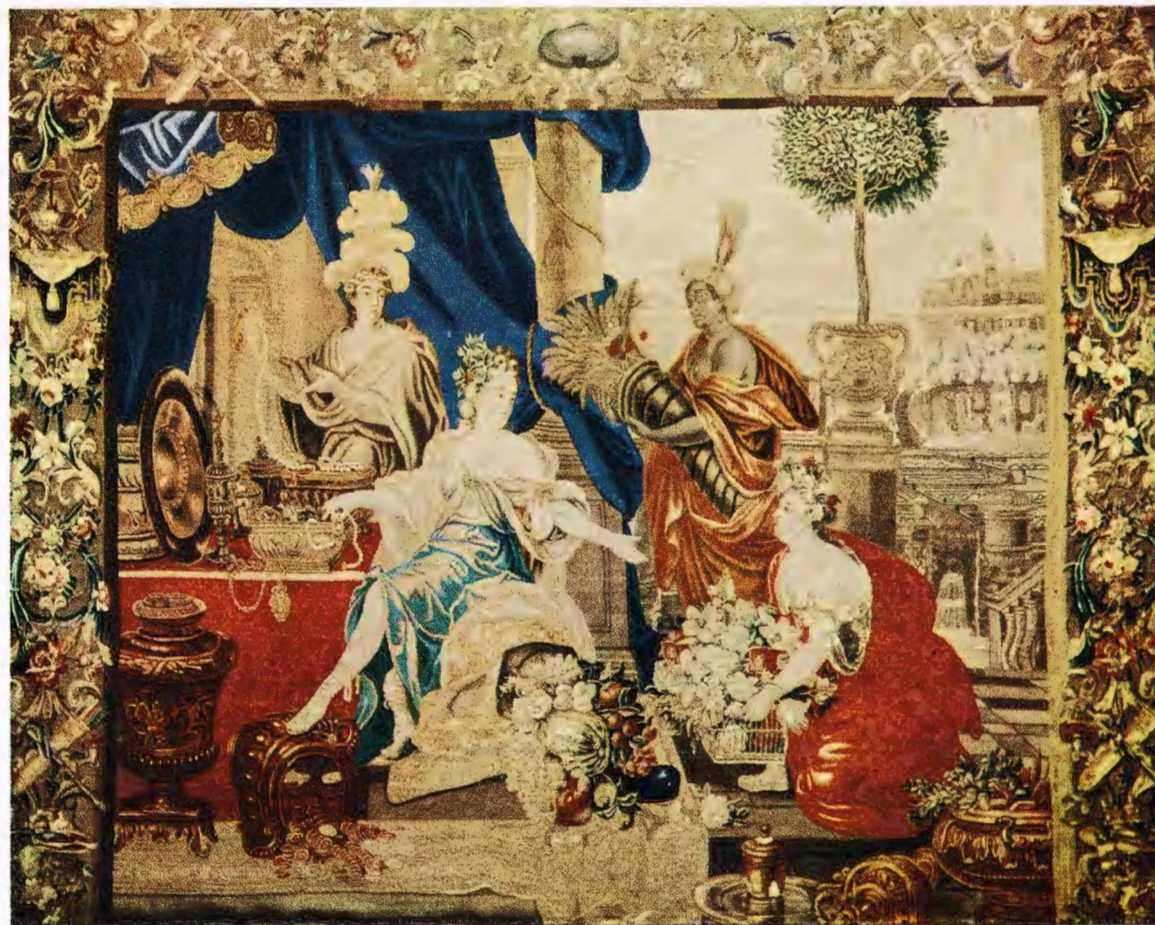
Under the foundation-stone of the gallery, laid by King George V on 25th March, 1914, is a bottle enclosing a parchment which informs posterity:





THREE BEAUTIFUL EXAMPLES OF WEDGWOOD jasper ware, so called because it resembles in texture the precious stone of that name. They stand on a Chippendale table in the Wedgwood room. The large vase is one of a pair, in form and decoration reputed to be unique. The green vase, one of a set of three, has a frieze modelled by the famous artist John Flaxman. The charming cup and saucer are in grey-blue jasper ware with white reliefs of cupids at play.

A SOHO TAPESTRY, called Peace and Abundance, one of a set of three formerly at Castle Howard in Yorkshire. Soho tapestries were made in London in the seventeenth century and closely resemble the more famous Mortlake tapestries. The bottom border of this tapestry was cut off when fitted into the furnishings of the castle.



**JOSIAH WEDGWOOD ON HORSEBACK**

B. 1724. GEORGE STUBBS, A.R.A. D. 1806.  
EXHIBITED VICTORIA AND ALBERT MUSEUM, 1930.  
FROM THE TWEEDMOUTH COLLECTION, 1905.  
BRITISH SCHOOL, 1782. W.M.L. 374.

PORTRAIT OF THE GREAT MASTER POTTER, *Josiah Wedgwood*, painted by *George Stubbs* in enamel colour on Wedgwood ware which was then baked in the pottery kilns in the ordinary way. *George Stubbs* (1724-1806) is best known for his portraits of animals, particularly horses.





THE NAPOLEON ROOM, which contains a remarkable collection of relics of the great soldier and emperor. The beautiful bed and dressing table once belonged to the Empress Josephine and were in her home at Malmaison, near Paris. Reflected in the mirror is a portrait of Napoleon by the Victorian artist George Richmond, R.A.

which is to say a ground area slightly larger than that of Westminster Abbey. Not that size is of account. It is built of the sweetly weathering Portland stone in a simple classical style, its roof line harmonising with that of the encircling village cottages and thus conforming to the architectural principle of neighbourliness. The building contains thirty-two rooms. In the main they hold up a mirror to British art and craftsmanship. As well as painting and sculpture, the gallery's range includes furniture, ceramics, textiles and engravings. Some of the collections thus brought together are considered by competent judges to be unrivalled in their particular spheres.

And now to come from the general to the particular by way of the Main Hall, which forms the subject of our cover photograph.

This stately room is devoted chiefly to English pictures of the second half of the Victorian era side by side with works by contemporary artists; and to English furniture, eye-opening in its skill and beauty, ranging from the reign of Charles II to the end of the long-ruling George III. The general effect is sumptuous. The Victorian paintings are on the grand scale, as exemplified above all in Lord Leighton's *Daphnephoria*, which stretches across the whole of one transverse wall, flowing as a strong, deep river flows to the sea. Those were opulent days, with the fashionable artists occupying high estate. Art was spelt with a capital 'A' and was much in the mouth of society, if less in the mind and understanding of the people.

The leaders of the pre-Raphaelite movement are strongly represented in the Main Hall; Holman Hunt with his famous *The Scapegoat* (the animal in the foreground and the abomination of desolation behind), and the ecstatic *May Morning on Magdalen Tower*; Burne-Jones with *The Tree of Forgiveness* and a number of other works in his allegorical and mystical idiom; Millais with several, including *Sir Isumbras at the Ford*, wonderful in its richness of autumn colouring; Rossetti with his haunting *Sibylla Palmifera* and its searching for the Middle Age.

But description in a few hundred words becomes a catalogue. The half has not been told—about the great landscape and portrait painters of the English tradition; about the incomparable Wedgwood collection and the Chinese porcelain; about the entrancing period rooms, the clocks of intricate design, the tapestries so marvellously wrought; about all here that is lovely and of good report.

Much better than writing or reading about the Lady Lever Art Gallery is to go there. It is less than half an hour by train from Liverpool. It is open every day except Good Friday and Christmas Day. And admission is free.

Lady Lever cut the first sod on the site of the Port Sunlight Factories of Lever Brothers Limited on March 3rd, 1888, and from that date until her death she was intimately associated with the progress of the Works and Village, and deeply interested in all the social institutions. She died on July 24th, 1913, to the great sorrow of all the inhabitants. Her resting place adjoins Christ Church, near the centre of the Village with which her life was so closely associated and by whose people she was so greatly beloved.

The Lady Lever Art Gallery is in the tradition of those proud monuments which men have raised to the memory of a wife. No old story of love moves to a more graceful sentiment than that which led Lord Leverhulme to its devising and dedication. He was a man of homely speech, but he could hit on the arresting phrase. "She was patterned after none," he said.

Tennyson wrote in his *Palace of Art*:

Full of great rooms and small the palace stood,  
All various, each a perfect whole. . . .

The description serves the Port Sunlight Gallery, if indeed perfection lies within man's compass. Many writers, seeking for a parallel, have looked to the Wallace Collection only to qualify the comparison. The late Arthur Mee, in the Cheshire volume of his county series, *The King's England*, wrote:

How often as we have left the lovely rooms of the Wallace Collection, with its exquisite display of all the arts of France, have we sighed and wished for such a perfect little collection of the work of our own race. It is to the eternal honour of the founder of Port Sunlight that in the very heart of his colony of labour he set up this palace of beauty, with as rare a collection of British art as could be brought together in the space.

The gallery stands on an island site and covers over an acre,

# In Norwegian Waters

By W. S. McLintock (Paints Division)

This summer cruise in Norwegian waters was just a part of the normal R.N.V.R. training. Here is an account of life in H.M.S. "Blackburn" and of the enjoyable time spent by the ship's company when anchored off the ports of the Norwegian fjords.

IN the spring of the year came the news that H.M.S. *Blackburn*, the sea tender of Clyde Division, would proceed on a two weeks' cruise in Norwegian waters during the month of July. From the numbers who applied to be included in the ship's company for this cruise a flotilla of ships could have been manned! Suffice to say that fortune smiled or favoured the brave or something—and my name appeared on the list of the "chosen people"!

Glasgow's Fair Friday being 13th July, seafaring superstition delayed our departure until a minute after midnight. At precisely that time we slipped our moorings and proceeded amidst the cries of good wishes from the few who had braved the night air to witness our departure.

The west coast of Scotland and the Hebrides are most beautiful from the sea. The notorious Pentland Firth gave us smooth passage, and soon afterwards the last sight of Scotland was but a blur on the horizon, far astern. On the other side of the North Sea lay Norway, and as we ploughed on our progress was marked by the disappearance of the Scottish fishing fleet, which was soon replaced by boats of German and then of Norwegian origin. Then one morning out of the mist appeared the coast of Norway, at first sight very much like that of Scotland.

On a naval cruise each day and night is ordered by a set routine which has weathered wars and the passing of years so well that it remains little altered from its pattern in the days of



A Norwegian pilot comes aboard

wooden ships and sails. The call "Hands to dinner!" properly piped is a thing of beauty to the ear, and although a modern ship of steel with fans blowing differs vastly in acoustics, it is easy to imagine how thrilling this call must have sounded in a wooden ship where the silence was broken only by the wind and sea and the creaking of spars and rigging.

Thoughts of such tradition are, however, very far away when the day begins at a most early hour. Then the pipe is a thing of torture, aided by a bull voice going through the ritual of "Wakey, wakey! 'Eave-o! 'Eave-o! Lash up and stow!"

Early rising is a feature of naval life which always strains obedience. At this awful hour, just after dawn, decks must come before self, and only when they have been scrubbed is the individual free to wash and breakfast.

During working hours each branch of the ship's company is at its allotted task. Civilian "elevenses" become "stand easy" and take place at 10 a.m. An hour later is the most welcome sound of the day—"Up spirits!" This is called "tot-time," and many elbows are lifted and much good rum goes down the hatch. Rum as "neaters" or "grog" could surely provide subject-matter for a book. It is a very old and well-loved tradition. Let it suffice here to say that without it the Navy just would not be the Navy.

Dinner follows and then the work of the afternoon. Tea at four o'clock signals the end of the working day, and in the



evening clothes are washed, socks are darned and letters home are written. Thus it is a full life, and at night after "pipe down" the silence in the mess is broken only by the snores and grunts of men in that deep and satisfying sleep which comes at the end of a hard day's work well done.

Our first port of call was Arendal, a holiday resort on the south coast. This was our introduction to fjords, and how pleasant it can be to sail along these maritime avenues of dark placid water, which soon open like a curtain to reveal the existence of a town at the fjord's head.

At this time we first became aware of a very notable feature of Norwegian life: almost every family either owns a small motor boat or hires one for the summer season, and at any time on the fjords there are fleets of these small boats coming and going. During the summer months the average working hours are from nine in the morning until three in the afternoon, and in this way the people store up sunshine for the long dark winter months. After work the people go to the fjords to swim, picnic, and fish from their little boats.

As a holiday resort Arendal caters for visitors who come from places as far apart as Oslo and Bergen. The spirit of holiday prevails, and after a long sunny day on the fjord or beach there is dancing in the evening. The atmosphere is warm and friendly, with a complete lack of formality in clothes and customs. We Scots pride ourselves on our hospitality to the stranger within our gates, but even Scottish hospitality could not surpass that of the Norwegian people, and we could not have had a better introduction to it than our reception and treatment in Arendal.

Our stay in that lovely place was all too short, but the programme said "Fredrikstad" and we sailed sadly away. At each of the ports we visited sadness was the universal feeling when it became time for our departure; and each visit seemed better than its predecessor, if such were possible.

Fredrikstad is much larger than Arendal, and to reach our berth we went far up the fjord and right through the town. As we sailed along our piper played, much to the delight of the people in the town. The piper was a feature of the whole cruise and brought forth "rave" notices in local newspapers. The Norwegians call our bagpipes "sakspipel" and share our love of the old Scottish music.

The outstanding incident of our visit to Fredrikstad was a reception and dinner given us by the mayor and council. We were received by the mayor at the entrance to a beautiful

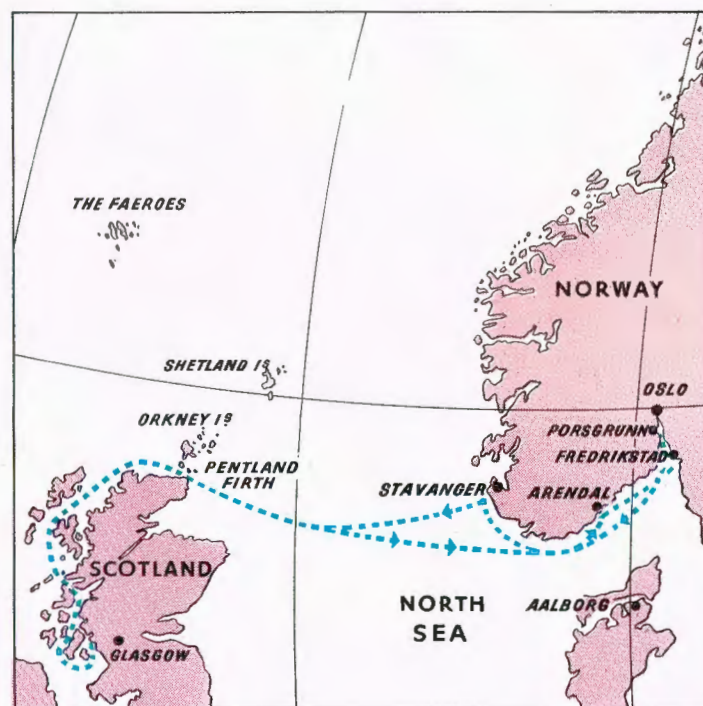
seventeenth-century fort on top of a hill. This is called the King's Fort and was built in the days when Fredrikstad was charged with the defence of the capital and the Oslo Fjord. The present-day inhabitants of Fredrikstad are justly proud of this ancient tie with the Crown.

Dinner was served in a long vaulted hall whose walls are some six feet thick. The hall is about thirty yards long and not more than three yards broad. A long table was laid all the way along the length of the hall. The tableware was all of Norwegian pewter, which is very lovely and showed to perfection against the sparkling crystal of the glasses and the white of the tablecloths. The only lighting was thick tallow candles placed at intervals along the table, and everything sparkled and flickered in their waving light. It would indeed be unkind to dwell on the meal and the wines which accompanied it, but suffice to say they were sumptuous. The speeches were witty and friendly and expressed to fullness the common ties between Great Britain and Norway. Our captain presented to the Mayor of Fredrikstad a letter of greeting from the Lord Provost of Glasgow, and he received a similar letter and a silver ashtray to convey to Sir Victor Warren and the citizens of Glasgow with the good wishes of the Mayor and citizens of Fredrikstad.

From Fredrikstad we proceeded to Porsgrunn, and again found that same spirit of welcome and good will which was the keynote of the whole trip. Porsgrunn is an industrial centre, but even here there was none of the smoke and dirt which seem to be a necessary evil wherever heavy industry is concentrated in Britain. This port is in the Telemark county, which is famous for its winter sports resorts and lovely seaside. Some of us went on a sightseeing trip of the district while others spent a most pleasant afternoon picnicking and bathing at the home of a member of the Norwegian Parliament, or Storting.

This gentleman was imprisoned by the Germans during the war and narrowly escaped death, being rescued from prison by some of his friends dressed in Gestapo uniforms and bearing forged papers for his removal. He is now greatly concerned in the economic recovery and defence of the country, and says that his memories of the war are always with him in his determination that Norway shall never again be unprepared. This feeling is widespread in Norway, and they look to us in Britain for lead and encouragement.

Certainly the prestige of Britain was never higher than it is



H.M.S. "BLACKBURN" ALONGSIDE THE QUAY AT STAVANGER. *The sailors on the quayside are a berthing party provided by the Norwegian navy.*

in Norway today. Indeed, the Norwegians are so akin to us that there was no feeling of strangeness such as is generally felt by the foreigner in a foreign land. Perhaps our common ancestors, the Vikings, have some part in this feeling of kinship.

Stavanger was our last port and was the biggest town we visited. Here is a large sardine industry. At night the fishermen of Stavanger set their nets over the side of the boats which lie tied up alongside the wharf. Above the net is a light to attract the fish. When morning comes all that is required is to pull in the net and sell the fish to the people waiting on the quayside. In the fishmongers' shops the customer can choose his fish while it is still alive and swimming in a tank.

Stavanger is a mixture of ancient and modern. The streets in the old part of the town are narrow and winding, and one can become lost in their maze quite easily. This old part of the town has a quaint beauty and much that is of interest.

Stavanger is one of the oldest towns in Norway, having been founded in the eighth or ninth century, and the Cathedral Church of St. Swithun was founded by the English Bishop Reinald. In the modern part of the town most of the buildings are of stone, and the modern houses and flats are most up to date. As in Britain, there is an acute shortage of housing in Norway, mainly due to wartime destruction.

On our last evening in Stavanger practically the whole ship's company assembled in the town square, where they had a sing-song, and then quite spontaneously marched back to the ship with the piper at the head of the column. Such must have been the quality of the Pied Piper of Hamelin. In this way ended our visit to Norway, and many of us regretted leaving so lovely a country and its happy, friendly people. But as the late Will Fyfe so truly said, "The best thing about going away is coming home again."



# THE PROOF-READER

THE one person absolutely certain to read this page is a gentleman whom any writer might be chary of offending. For Mr. Harry James Eden—with six colleagues of The Kynoch Press—spends all his working hours looking for mistakes made either by writers or by printers on behalf of writers.

Just what is this rather remarkable job of reading for a living? "Simply," says Mr. Eden, "looking through the first copy of printed matter and seeing that it is quite correct before the rest is run off."

The more straightforward part of his work merely demands that he has an exact knowledge of perfect printing, so that he can spot minor eyesores like uneven spacing, wavy lines, misplaced letters or members of a different type-family. Spelling, too, may need attention—and here the trap is not the uncommon word (that can always be checked in a dictionary) but the ordinary, everyday word which has alternative spellings.

For the reader must not only know where to use "there" and where "their"; he must also remember to follow the rules laid down by his own management ("house style," this is called) and see that—in printing produced by The Kynoch Press, for instance—"organisation" is spelled with "s" and "fertilizer" with "z." "Of course," our particular proof-reader admits casually, "it is a bit harder when you're reading a foreign language, especially if you don't know a word of it. I've read stuff in French, German, Italian, Turkish and even Chinese—and that can be tricky. A small spelling mistake or a wrong accent, and the result might be a very rude word indeed!"

Even when he is satisfied that the printed copy is flawless Mr. Eden's task is only just beginning, and to complete it he needs an unusually high standard of general knowledge, great patience and an extra sense which flashes "Look out! Something wrong here!" The mistakes authors make, even in straight reporting, are infinite in their variety. They are careless with the calendar, rashly juggling with days and dates ("Leap year foxes them," interjects Mr. Eden with a sorrowful frown); far too apt to rely on memory instead of a reference book; and horribly irresponsible when it comes to placing towns and cities in their right county. All this evidence of forgetfulness is mercifully erased by Mr. Eden and his fellow watchdogs, so that the author's words, when finally transmitted to an eager public, are miracles of accuracy.

Material to be read reaches the proof-reader either as "galley proofs"—long strips of straightforward printing—or as "page proofs"—samples of the finished pages, including titles,

photographs, diagrams and so on. Each time the reader follows the same drill. First, he "rules the copy" by running a rule one line at a time down the printed matter. At this stage he is looking for what he calls literals—mistakes in the printing, grammar or style. Then, as a double check, the original material is read aloud to him while he concentrates again on the printed matter. In this way he can be certain that nothing has been accidentally omitted, added or misplaced.

Page proofs make still more exacting demands upon the reader, for now the lines of print, instead of running steadily down a column of uniform width, may be fitted into a complicated jigsaw of photographs. So the proof-reader must give extra attention to words split up and spread over two lines (there are strict rules about these); he must see that photographs have the right captions, that diagrams have not turned themselves inside out or upside down, that margins are even and that facing pages, when eventually bound into a book or magazine, match up precisely.

Mr. Eden, although he has been a printer for half a century, became a proof-reader by accident. At the end of his apprenticeship he had an excellent grounding in all the technical niceties of the trade—"We had to learn everything in those days, from composing to mending a gas engine. There wasn't any of this new-fangled specialisation"—and over the next twenty years considerable practical experience was added to theory. Some twenty-three years ago he joined The Kynoch Press and shortly afterwards was asked to help out in an emergency. One of the regular proof-readers was away and there was some urgent work on hand. "That temporary job," Mr. Eden told us, "has lasted for twenty-one years. It so happened that the very first proofs I checked contained a lot of names and addresses. Geography was my pet subject at school, and as luck would have it I found quite a few blunders in those first proofs. Looks as if there's a moral there somewhere—what you learn at school does come in useful sometimes!"

Since then thousands of pages of proofs—about 200 each week—have passed through his careful hands. In his time he has handled copy for the *Magazine* and the scientific magazine *Endeavour*, advertising material and calendars ("You can have a lot of fun with those"). Nowadays he specialises in stationery orders and countless forms—some of them elaborately ruled—calling for meticulous accuracy in measuring and spacing.

Good proof-readers are highly valued members of any printing office. There is an old saying "*A printer advertises his mistakes, a doctor buries them, a plumber charges for them.*" No printer wants this form of advertising.

D.B.T.



Mr. H. J. Eden (Proof-reader)



# I.C.I. NEWS

## MR. CHAMBERS ELECTED A DEPUTY CHAIRMAN

MR. S. P. Chambers, C.B., C.I.E., Finance Director of I.C.I., was elected a deputy chairman of the Board on 24th July.

Mr. Chambers, who is 48, was appointed I.C.I. Finance Director in July 1947. He brought to this post twenty years' experience of public finance, which culminated in his appointment in 1945 as head of the finance division of the Control Commission for Germany.

His career began when he joined the Inland Revenue in 1927 as an Assistant Inspector of Taxes. After promotion to Inspector he was assigned to special duties at Somerset House.



Mr. S. P. Chambers

(Photo: Bassano)

In 1935 he was a member of the Indian Income Tax Enquiry Committee, and later was invited to act as taxation adviser to the Government of India. Mr. Chambers became a member of the Indian Legislative Assembly and later of the Council of State; for his services to India he was created a Companion of the Indian Empire.

Returning to this country, Mr. Chambers was appointed Director of Statistics and Intelligence to the Board of Inland Revenue, and from 1942 to 1945 he was also secretary to the board. In addition he was a Commissioner of Inland Revenue from 1942 to 1947. Yet another overlapping responsibility crowded into a busy life was the post of chief of the Finance

Division of the British Element of the Control Commission for Germany. He was created a Companion of the Bath in 1942.

Mr. Chambers is also a director of the National Provincial Bank Ltd., African Explosives and Chemical Industries Ltd., Imperial Chemical Industries of Australia and New Zealand Ltd., Imperial Chemicals Insurance Ltd. and Thames House Estate Ltd.

## Long Service Awards in Vienna

The first presentation of Long Service Awards to members of Bickford & Co. A.G. was held in Vienna on 18th June.

Bickfords, whose works are at Wiener Neustadt and Neudörfel, two small towns in the Russian Zone, was founded in 1879 to manufacture safety fuse and detonating fuse. In 1926 a slide fastener plant was erected at Wiener Neustadt next to the safety fuse plant. During the last few weeks of the war the works were very badly damaged by Allied bombing, owing to their proximity to the big Messerschmitt aircraft factory. Today slide fastener is being made in ever-increasing quantities and the manufacture of safety fuse has recently been restarted at a neighbouring works which used to make detonating fuse. This is no mean achievement, as virtually the whole equipment has been patiently built up from the scrap that was left after the heavy bombing.

The presentations were made by Captain W. E. Smith, a

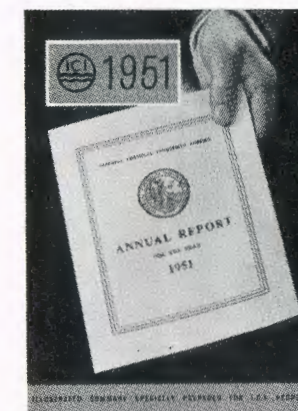


Frau Kraus at the Long Service Awards dinner in Vienna. On her left is Herr Wehrl, and nearer the camera are (left to right) Mr. E. Hodgkin, Mr. Paterson Elliott and Capt. Smith.

director of Metals Division, who is also chairman of Bickford & Co. A.G. Among the recipients were three who had completed 30 years' service or more and seven who had completed at least 20 years' service. Captain Smith's speech, which was in English, was ably translated by Mr. Paterson Elliott, who is the resident joint manager. Particularly warm applause greeted the presentation of a gold watch to Frau Kraus, the other joint manager, who has had 30 years' service with Bickfords. Not only is Frau Kraus well known to a number of I.C.I. people who served in the Vienna office before the war, but she is particularly and deservedly popular with all the staff and workers at Bickfords. In the difficult days at the end of the war, when all was chaos, it was very largely due to the efforts of Frau Kraus that Bickfords survived as a firm at all.

A warm welcome was given to one of the visitors, Herr Wehrl, Mayor of Wiener Neustadt, who was at one time a fitter at Bickfords. (Also present was his brother, chairman of the Works Council and a plant foreman at Bickfords, who has completed 18 years' service with the Company.) The Mayor was appointed to his post by the Russians immediately after the war and has held it ever since. He made an excellent speech, recalling the happy days he had spent in the works and hoping that, when his term as mayor ended, he would return.

## "I.C.I. 1951"



The illustrated and simplified version of the I.C.I. Annual Report for 1951 has now been printed and is being distributed by all Divisions of the Company to their employees.

Every employee of the Company should receive a copy through the post within the next few weeks. Anyone who does not should apply to his Division Staff or Labour Department or to the Head Office and Regions Staff Department.

## Nylon B win I.C.I. Rifle League Cup

The handicap shoot between the winners of Divisions 2 and 3 of the I.C.I. Rifle League was held in July. The winners were Nylon B team, with a gun score of 476 and a handicap score of 500. Their opponents, Kynoch B, returned a gun score of 385, which gave them on handicap a score of 400.055.

The Kynoch team had the misfortune to lose one of their targets in their own internal mail. This put them right out of the running, as in accordance with the rules only the four cards they produced could be counted.

The handicapping system—known as the Macrae Handicap—under which this match was shot sometimes puzzles followers of the sport, but it is generally acknowledged to be the fairest. The average reached by each of the two teams during the last season's league is taken as the basis; the gun score made in the final shoot is matched against this average, and the final result is read off a specially prepared chart.

The medal for the best individual record during the season goes to Mr. N. Ackroyd of Billingham. Mr. Ackroyd and Mr. A. Skinner of Kynoch had both scored the very high average of 99.83 for the six shoots of the 1951-2 season, and

a tie shoot had to be arranged. This took place at Bisley, where both of them—as well as the Rifle League's hon. secretary—were attending the N.S.R.A. meeting.

The league will again be organised for the winter season. The hon. secretary hopes that any Division or office which can form a team will contact him and help to make the league the biggest in the country organised by one company.

## ALKALI DIVISION

### Labour Manager Retires

Mr. R. L. Rait, Alkali Division Labour Manager, retired from the Company's service at the end of July for reasons of health.

Reggie, as he was affectionately known to his countless friends, joined the Company in March 1928 as Assistant Labour Manager and Welfare Officer at Fleetwood Works, the administration of which had recently been taken over by the Alkali Division. After a year's work there he was transferred to the Central Labour Department and, among other things, he was the first person to act as secretary of the Central Council, the office now held by Mr. A. W. Inglis. In 1935 he went to the Recruiting Section of the Central Staff Department. Three years later he returned to the Alkali Division to take over the post of Division Labour Manager, which had become vacant owing to Mr. Max Woosnam's transfer to the General Chemicals Division.

Reggie Rait's career has been a colourful one. As an extremely young man he once stood for Parliament, and very nearly got in. He has the unusual accomplishment of being a skilled amateur conjurer. He has taken a keen interest in all the sporting activities of the Division and has been a faithful spectator on the I.C.I. Alkali football ground, offering vocal encouragement to his side in language sometimes hardly suited to his earlier Parliamentary aspirations! For many years he was chairman of the Winnington Park Recreation Club.

Possibly what will be remembered longest about Reggie is his quite exceptional flair for organising large social functions. Nobody, for example, who attended the 75th anniversary celebrations will forget the efficiency with which the whole gigantic function was organised. He brought the same efficiency to bear on other less spectacular events, such as the annual presentations of Long Service Awards, the athletic sports, the foremen's dinner and the pensioners' parties.

On the employment side of his activities as Division Labour Manager he showed himself a master of procedure and a recognised authority on the complicated provisions governing the employment of labour in I.C.I. He made many friends in the trade union movement, and under his chairmanship negotiations with the local and area officials have always been conducted in an atmosphere of co-operation and mutual regard.

It is sad that ill health should have struck him at a comparatively early age. It is the wish of everybody, both within and without the Division, that rest from the heavy responsibilities of his office may soon bring him to complete recovery.



Mr. R. L. Rait



## Home Guard Commanding Officer

The new commanding officer of the 8th Cheshire (Northwich) Battalion of the Home Guard is a member of the Alkali Division: he is Captain (S) N. B. W.-Rose, O.B.E., R.D., R.N.R. (Rtd.).



Captain Rose

Captain Rose's Service life began in khaki early in 1915, but after a short time he received a temporary commission in the Royal Naval Reserve. He served throughout the first world war in the 10th Cruiser Squadron, which carried out the Atlantic blockade and, later, convoy work. The bulk of his service was thus in the Atlantic; he also spent some two years in the Denmark Straits between Iceland and Greenland. At the end of 1916 he sailed on special service with a squadron which chased one of the German raiders as far south as Cape Town. During this period the ship sent one man to hospital in December with frostbite and another to hospital in January with sunstroke!

During the inter-war years Captain Rose held a permanent commission in the R.N.R. At the beginning of the second world war he was promoted to Commander. He was soon at sea in H.M.S. *Coventry*, an anti-aircraft cruiser; this ship was engaged in home waters in the tail-end of the Norwegian expedition, in mine-laying and in East Coast convoy work. For the next three years she was mainly in the Mediterranean, where the work included Malta convoys, the evacuation of Greece and Crete, and the occupation of Syria. Captain Rose was awarded an O.B.E. for his service during this period.

After this he was appointed to the Portland Base, which became the assembly point for the main American forces, other than infantry, which carried out the European invasion. His service here earned him a commendation from the C.-in-C., Portsmouth. He was promoted to Captain in 1945 and completed his active service in Colombo, returning to I.C.I. in 1946. He was transferred from the active list to the retired list in 1949.

Captain Rose joined I.C.I. in 1927; he now holds the position of Work Study Manager of the Alkali Division.

## BILLINGHAM DIVISION

### Apprentice represents British Red Cross in Paris

Billingham's youngest first-aider, 17-year-old apprentice Charles White of Workshops, was one of six young men selected by the British Red Cross Society to represent Britain at the International Youth Study rally which was held near Paris last month. Candidates for the team, which also included six girls, were first chosen by their county headquarters, the final selection being made by the London headquarters of the British Red Cross.

Meetings of the International Youth Study Centre are held periodically in different European countries under the auspices of the International Red Cross. At this meeting Charles White met delegates from France, Italy, Belgium, Holland, Luxembourg and Yugoslavia. It lasted ten days, and not only gave teams the opportunity of demonstrating their own methods of

training but also gave practical expression to one of the aims of the Junior Red Cross: international friendship and understanding.

The son of Mr. C. White, a Plastics Works rigger with 19 years' service, Charles is singularly modest about his selection. He regards this humanitarian service as a hobby, and since he joined the local division of the Red Cross a couple of years ago he has followed it with enthusiasm. He became the factory's youngest-ever first-aider in February, when he passed the annual entrance examination.

### Honour for Dowlais First-aider

Mr. Arthur Myrddin Jones, a methanol stills attendant at Dowlais Works, has crowned more than 25 years' faithful service to the St. John Ambulance Brigade with admittance as a Serving Brother of the Order of St. John of Jerusalem, Priory for Wales.

Mr. Jones formed the first St. John Ambulance cadet division in Troedyrhiw, Merthyr Tydfil, and during the early months of the last war assisted in the formation of the first nursing division there. He was one of the founders of the Troedyrhiw medical comforts depot and still takes an active part in its administration, with his wife as officer in charge. He is now staff officer in the Taff Valley Corps of the St. John organisation.

Mr. Jones, who has also done much voluntary work for the Red Cross and the British Legion, has been a member of the I.C.I. Dowlais first aid team on several occasions. The present captain of the team, Mr. D. R. Williams, who was elected a Serving Brother of the Order of St. John in 1945, was one of the guard of honour at the investiture of Mr. Jones at Cardiff.



Mr. A. M. Jones

## DYESTUFFS DIVISION

### Olympic Captain defends British Athletes

Back at Nylon Works last month after a fortnight in Helsinki as captain of the British athletics team, Mr. Harry Whittle was pondering the results of the XVth modern Olympic Games.

Of one thing he was quite certain: there is nothing wrong with Britain's athletes. "I think all this discussion of 'Why didn't Britain win the gold medals?' is a little unjust," said Mr. Whittle. "In my opinion the sense of anticlimax which some people in this country suffered was because they had been led to expect too much. Some of the newspaper sports commentators showed a lack of international athletics knowledge by setting aside about twelve gold medals for our athletes before the games began. When we didn't win them the newspapers had to blame someone, so they blamed the British team."

"We ourselves didn't expect too much, and we weren't disappointed. In fact, we did better than we expected." (Britain won fifteen places in the men's events, as against ten in 1948.)

One member of the team whose performance was well above his expectations was Harry Whittle himself. He admitted modestly that he was pleased with reaching the finals of the

400 metre hurdles and with gaining fifth place in a time equal to his best, which is only 2.3 seconds slower than the new Olympic record set up by the winner, C. H. Moore of the U.S.A. Half the art of Olympic running, he thinks, is to get through the heats in as slow a time as possible consistent with reaching the final. "Running four fast quarter-mile hurdle races in two days can be quite gruelling," he says, "and you must keep something in reserve for the final."

The outstanding British competitor, in Harry Whittle's opinion, was a runner who received no publicity at all: Albert Webster, who came fifth in the 800 metres after running two of his heats in three seconds less than his best previous time. The outstanding personality of the Games, he considers, was without a doubt Zatopek, the Czech, who won three events, including the Marathon—"and that," says Mr. Whittle, "after complaining that he didn't feel very well!"

Harry Whittle holds the same views on "amateurism" now as when he left for Helsinki. Our amateurs are more amateurish (as he puts it) than those in some other countries, where the state,



Harry Whittle (right) gets a welcome-home handshake from Dr. Collin, Nylon Works assistant manager

universities or industry may back the training of promising athletes. But even at the risk of Britain's athletes remaining in the second rank he would not wish the British system changed.

"We have the talent here," he says, "and we can do a lot by scientific training. To be a successful athlete nowadays not only involves physical training but a minute study of technique. These methods can still be developed further—that's why you see Olympic records beaten at one Olympic Games after another, even though it is by small margins."

Harry Whittle himself, an engineer, finds his knowledge of mechanics useful in hurdling. This winter he will be working at his hurdling technique every week-end and taking 3-4 mile building-up runs. And between now and the next Olympic Games he hopes to become proficient enough at putting the shot, throwing the discus, hurling the javelin, the high jump, the long jump, the pole vault, the high hurdles and the 100, 400 and 1500 metre races to compete in the Decathlon.

### Huddersfield Swordsmanship

Mr. S. Wigglesworth, the Fire Officer at Huddersfield Works, is a keen swordsman and a founder member of the Huddersfield Fencing Club, which was formed in 1949. His

duties in Fire, Safety, and Civil Defence at the works may seem at variance with such a "bloodthirsty" hobby, but since



Huddersfield fencers Miss Mortimer, Mr. Wigglesworth and Mrs. Gledhill discuss a point of technique

proficiency with the sword was once a guarantee of a reasonably long life perhaps there is safety in fencing.

Two other members of the Fencing Club are Mrs. Malcolm Gledhill and Miss Joyce Mortimer, both of the Commercial Department at Huddersfield Works; membership was recently increased when two more I.C.I. employees, Miss R. Blamires and Miss M. Illingworth, decided to join the club.

Salle d'Armes is held every Tuesday evening. In addition to classes and individual instruction, bouts are fought with foil, épée and sabre.

Mr. Wigglesworth took part in the Yorkshire Sabre Championship held in March this year, but was defeated.

## GENERAL CHEMICALS DIVISION

### A Home Guard Appointment

A short time ago the names were announced of men who had been appointed to be commanding officers in the recently re-established Home Guard.

Among them was Mr. T. I. J. Toler—a section engineer at the Castner-Kellner Works of the General Chemicals Division—who has been appointed to command the 10th Cheshire (Runcorn) Battalion, Home Guard, with the rank of Lieutenant-Colonel.

Mr. Toler is well equipped in every respect for the new duties he has taken on. His war record was a fine one, and he reached the rank of Major in the Glider Pilot Regiment, in which his service won him the award of the Distinguished Flying Cross. After the war he was appointed officer commanding his local Territorial



Mr. T. I. J. Toler



Unit, the 96th A.G.R.A. (A.A.) signal Squadron (T.A.). Pressure of his other many activities, however, forced him after a while to relinquish this appointment and to transfer to the Territorial Reserve of Officers. From this, to use his own words, he has been "hailed out to take on the new job."

Some two years ago his qualities received recognition in a quite different direction when he was appointed a Justice of the Peace in the County of Chester.

## LEATHERCLOTH DIVISION

### Trophies Galore

The photograph below shows the trophies won by sections of Hyde Recreation Club, with the captain or a representative of each section. Every one of the winter sections has captured one or more honours.

With only 200 playing members, Hyde Recreation Club is prompted to ask: Can any Division beat this?

The full list of successes is as follows.

#### FOOTBALL SECTION

Hyde Federation League Championship Shield  
Reporter Cup

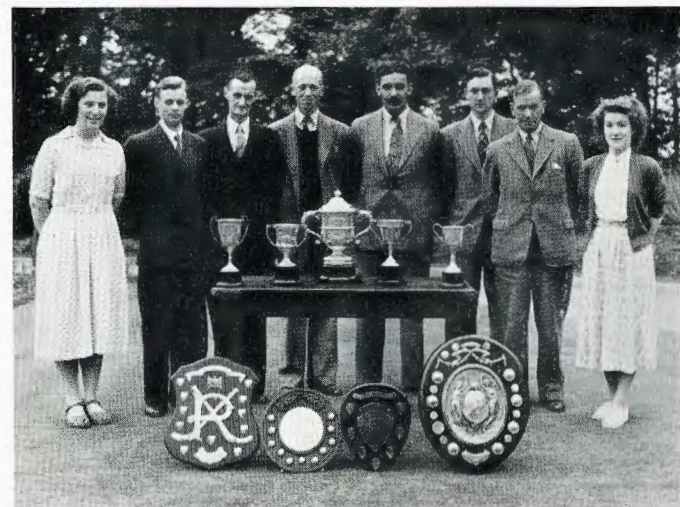
#### LADIES' HOCKEY SECTION

Manchester Women's Hockey League 3rd Division Championship  
Referees' Shield

#### TABLE TENNIS SECTION

##### Men's 1st Team

Ashton and District Table Tennis League 3rd Division (West) championship  
Brown Cup



Hyde sports enthusiasts pose with their trophies

#### Ladies (Hyde and District League)

Newton Shield  
Trevor Cox Cup

#### BADMINTON

B Team (Hyde and District Badminton League)  
League Handicap Shield

#### BILLIARDS AND SNOOKER

(Orme's Stalybridge and District Snooker League)  
Knock-out Cup

## METALS DIVISION

### Mr. W. G. Tucker

Mr. W. G. Tucker, who is in charge of casting in the Division's main strip rolling plant at Witton, has been elected president of the Birmingham Metallurgical Society for 1952-3.

For many years an active member, Mr. Tucker, was elected to the society's Council in 1946 and vice-president two years later. He joined Kynoch Works in 1919 and was transferred from the Rolling Mill to the Casting Shop in 1922.

Past presidents of the society include Sir Arthur Smout, Dr. Maurice Cook (joint managing director, Metals Division) and two Division factory managers, Mr. W. L. Govier and Mr. E. A. Bolton.



Mr. W. G. Tucker

## NOBEL DIVISION

### He Punches Well

Boxing fans in Ardeer are watching the career of Bob Kilpatrick, one of their workmates. Bob is making a name for himself as a welterweight or lightweight professional who punches powerfully with both hands to win all his fights before the bell has gone for the last round.

He discovered his boxing skill in the Army, in which he held three welterweight titles: the Aldershot Command, the Southern Command and the National Service Two-star Medal. In the Army he fought thirty fights and lost only one, a defeat caused by an injured hand. Twenty-five of his victories were won before the end of the fight.

His experience as a professional since then has been similar.

(Photo: Glasgow Evening Times)



The Ardeer boxer who wins: Bob Kilpatrick

Every one of his eight matches has finished with a knock-out or with the collapse of his opponent.

Competent boxing judges reckon that Bob Kilpatrick will go far. He works in Ardeer Propulsive Department and is said to be a peaceful fellow until he gets in the ring.

## PAINTS DIVISION

### A new Division Director

Mr. B. G. Walker, Division Commercial Services Manager for the past two and a half years, has been appointed a Division director as from 24th July, 1952.



Mr. B. G. Walker

Mr. Walker is a chartered accountant by profession. He served his early working years on the Continent, attached to the Paris office of Price, Waterhouse & Co., chartered accountants. In his leisure hours he was an active member of the British Rugby Club in that city.

Returning to England in 1937, he joined the Statistical Department of Dyestuffs Division and after the war was transferred to their Secretarial Department. In 1947 he came

to Slough as assistant secretary to Paints Division under the late Mr. John Martin.

On the death of Mr. Martin in 1949 Mr. Walker was appointed Division secretary and twelve months later became Division Commercial Services manager.

Mr. Walker is on the board of the French associate company, Société Française Duco, Paris. He is also a Freeman of the City of London and a Member of Council, Slough Chamber of Commerce.

Being a territorial soldier, he was called up at the outbreak of hostilities in 1939. He saw service in France, Belgium, Holland and Germany in the Royal Artillery and took part in the invasion of Normandy on D Day.

### Philatelist wins International Award

Mr. B. C. Taylor, Division technical representative in the metal pretreatment field, has long been well known among expert stamp collectors for his Danzig collection. Now this collection of Mr. Taylor's has become world-famous. At the International Philatelic Exhibition held in Utrecht, Holland, in July, it was awarded a plaque and a bronze medal.



Mr. B. C. Taylor

To win individual recognition in such distinguished company is no mean achievement. Among the congratulations Mr. Taylor received were those of Mr. Frank Godden, the commissioner appointed by British philatelists to represent them at such exhibitions.

Mr. Taylor is a Fellow of the Royal Philatelic Society. He

became a serious philatelist in 1937, and his collection now fills 1400 pages in albums. It includes one stamp which is today worth several hundred pounds.

## PLASTICS DIVISION

### The Bulldog Breed

Bulldogs are affectionate animals, and contrary to popular belief they are not ferocious, says Mr. J. E. Alcock (Packaging Section, T. S. & D. Dept.), who breeds and shows bulldogs in his spare time.

During the past three years Mr. Alcock has been successful at shows as far afield as London, Manchester and Birmingham, and he plans to show at Crufts at Olympia in the new year.

The secret of success in the show-ring, he confides, is to breed from good stock, allow the dogs plenty of exercise and



Some of Mr. Alcock's bulldogs at a month old

feed them well. Bulldogs have large appetites, and a fully grown animal eats about a pound of red meat and a pound of biscuit a day. Mr. Alcock told us that bitches need special care during whelping, and he likes to supplement their diet with eggs beaten up in milk. "But how do you manage about the eggs?" we enquired. "My ration," he said rather wistfully.

## SALT DIVISION

### Motor-cyclist wins Scottish Award

Mr. Tom Copeman (Drawing Office, Salt Division) is to be congratulated upon gaining a first-class award in this year's Scottish Six Days Open Reliability Trial. "The Scottish," as enthusiasts will be well aware, is perhaps the brightest star in the motor-cycling firmament, and Mr. Copeman has already behind him both a second-class award in the 1950 trial and a first-class award last year. Winsford and District Motor Club may well be proud of a member who brings a second and two firsts in three successive years. "The Scottish" takes place in May each year and is organised and controlled by the Edinburgh and District Motor Club, who offer the splendid trophies for which the "trialists" compete. Altogether this year there were 180 competitors in the trial, which constitutes a record.

The compilers of this year's illustrated summary of the annual report, to which reference is made elsewhere in the Magazine, desire to offer their most sincere apologies to all





Mr. Tom Copeman, who won an award in Scotland again this year

concerned for having inadvertently printed as a picture of Mr. Copeman what was in fact a portrait of his colleague, Mr. John B. Hodkinson. Perhaps the splendour of the machine which is in the foreground diverted their attention momentarily from its rider! The mistake at all events is much regretted.

### WILTON WORKS

#### Mr. L. F. Knapp

In the death of Mr. L. F. Knapp we have lost one of our pioneers.

Leo, or Knappski as he was fondly known by so many, was a quiet, unassuming colleague with a dry but ready wit. His infectious chuckle was the means of resolving many a problem, and when that failed his reasonable approach and common sense soon won the day.

He graduated at University College, London, and after a short time on photographic research with Dr. Slade joined Brunner, Mond & Co. in 1920. In company with Messrs. Zealley and Wride his early service was at Walsall, where some preliminary work was done on the ammonia synthesis process which Brunner Mond had acquired. His next move was to a pilot plant erected at Runcorn to use electrolytic hydrogen from Castner-Kellner. Eventually a team including Leo Knapp was posted to Billingham for the design and erection of the first ammonia unit based on coke. In after years he was to manage ammonia manufacture at the time of its greatest expansion. Despite this close association with ammonia he was better known in recent years as the first works manager of the Billingham Oil Works and later as the general manager of Trimpell Ltd., Heysham.

In April 1947 Mr. Knapp was appointed general works manager, Wilton, and a member of the Wilton Council. Once again he helped to pioneer a new project, where he was able to use his vast experience to encourage co-operation among the

various interests on a new composite site. By his untimely death we lost a good friend, and our sympathy is with his widow and son.

### I.C.I. (INDIA)

#### Golf Trophy won back after 14 Years

After fourteen years the coveted Merchants' Cup golf trophy is again in the hands of I.C.I. (India). The competition for the cup takes place annually on the Royal Calcutta golf course during the monsoon, when teams of six from merchant firms and banks in Calcutta battle to produce the lowest aggregate number of strokes to complete the course.

I.C.I. (India) last won the Merchants' Cup in 1938; since then Messrs. Kilburn & Co. have held it uninterruptedly. This year Kilburns were without their star players, which left I.C.I. (India), Messrs. J. Thomas & Co., and the Chartered Bank with the best chances of winning.

The final round was full of excitement. The Chartered Bank, who had led the field for five rounds, could not stay the course. J. Thomas & Co.'s last man returned a fine 76, giving them a total of 531. Their position certainly looked formidable, as it meant that I.C.I. (India)'s last man could not afford to take any more than 85 strokes to win.

Mr. C. W. Perry, however, rose to the occasion magnificently. He put in a heroic round of 83, thus winning the cup for I.C.I. (India) by three strokes. This round was all the more remarkable as Mr. Perry had just risen from a bed of sickness.

The following were I.C.I. (India)'s individual scores in order of play: N. S. Watson (85), A. Keown (100), G. Wilkinson (93), G. R. R. Brown (80), D. N. Hawkins (87) and C. W. Perry (83), giving a total of 528.

### I.C.I. (TURKEY)

#### D.Sc. for Technical Manager

Dr. Turgut Noyan, manager of the Technical Service Department of I.C.I. (Turkey) Ltd., Istanbul, has recently had the distinction of Doctor of Science conferred on him by Istanbul University. He graduated from this university in 1938.

The thesis for which Dr. Noyan received his doctorate concerned the diffusion of sparingly soluble substances in solvents.

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### OUR NEXT ISSUE

Mr. A. D. Sharp (Lostock Works, Alkali Division) leads the October *Magazine* with an account of his trip to America last spring on an industrial scholarship. He spent several months in the deep South, where he grew to know Americans well and to value their fresh enthusiasm. The picture he draws of life in an American university is more than usually vivid, and is recorded with an observant eye for detail worthy of that great foreign correspondent Alistair Cooke.

Next come two articles of what one might almost call a domestic nature—one from Norman Boodson of Metals Division on the growing of cold house orchids (illustrated in colour) and another from a London antique dealer on classical English furniture of the eighteenth century. Lastly Mr. Harmar-Brown (Central Publicity Dept.) writes a piece that cannot fail to raise several laughs—"My Early Experiences with a Motor Car."

# Attention!



# Audience at Large!!

By Dorothy Thomas (Metals Division)

I AM often struck by the apparently inexhaustible reserves of amateur entertainers. In their dozens, actors, singers, dancers and musicians willingly supplement their more lucrative activities with many hours of hard and unpaid labour, just for the fun of appearing briefly on the more exciting side of the footlights.

Yet never once, in all the eulogies penned on the subject, has anyone devoted more than a passing phrase to that most important element—the audience.

All my entertaining colleagues would agree, I am sure, that the success of an audience never depends entirely on its size. Believe it or not, there is one thing more depressing than playing to empty chairs, and that is playing to vacant faces. For while it is generally possible to concoct some soothing fiction to account for small numbers, the only possible reason for an unresponsive large group is that it is bored.

Now, why is it that the same show, given under identical conditions to two or more audiences of similar size, arouses such a very different response at each performance? Observing this situation at close quarters four times a year, I have, I believe, managed to solve half the riddle.

The group to which I belong gives six performances of each production. We know by now that the first-night audience is always kind, even indulgent, because it is largely composed of fond relations with more charity than judgment. We know that on the second night our friends will follow more or less blindly the lead set by the professional critics in the local newspapers. And we know that on the last night a big-hearted public will come determined to enjoy itself, even at the expense of smothering the cast with roars of ill-timed laughter.

But nobody yet has been able to explain why the three remaining audiences range from deliberate inertia to uproarious gaiety; why subtle humour finds instant response on Wednesday and strikes, in Mr. Fry's words, with a dull thud on Thursday; why 150 individuals may unanimously praise a play at the beginning of the week and complain icily of bad taste at the end. Ah, well! We are at least preserved from monotony.

Or are we? Don't we all know that, whether we are playing to fifty or 500, whether the elements be fair or foul, the season Christmas or midsummer, we can count on the unfailing appearance among us of a few faithful fiends?





... arch enemy of the entertainment world

Heading this list is that arch-enemy of the entertainment world, the Late Mr. X. With a craftsman's skill he chooses the most inaccessible seat in the house and dons his heaviest boots to ensure a really effective entrance. (If he remembers to bring a walking stick with him, he can splinter the atmosphere by dropping it or create an even livelier diversion by wrapping it round several pairs of legs.) Ideally, he has a peculiarly penetrating voice in which to argue with the poor devil of a house manager, and a dogged persistence in refusing every conceivable compromise.

It is his timing, though, which really earns our admiration. A noisy comedy, to be sure, unfairly detracts from his performance, but even here, with a lot of practice, he can shatter a painfully rehearsed aside or drown the one line which really gives the clue to Act I. Better by far, however, is the pauseful pace of tragedy or the highly skilled precision of drama, for here there is practically no hazard about the intruder's task—success is assured.

A still more persistent affliction is the Non-stop Chobbler. This sweet soul presumably spends the whole period between shows bombarding the confectionery market, sternly refusing any product not wrapped tightly in tinfoil or specially unyielding cellophane. Where possible, her stockpile includes a few boxes of chocolates, since these have the additional advantage of an outer crackling and at least two layers of crisp wadding inside.

Without pausing even to look at a programme our friend settles her lapful of goodies and crunches her way from curtain rise to curtain fall, happily oblivious of the noisy incompetence with which wrappers are detached from their moorings and added to the growing pile round her feet. Occasionally, in generous mood, she shares her good taste with a multitude of

fellow spectators, barging her bags and boxes with emphatic gesture backwards, forwards and sideways.

I have credited this enemy of society with feminine sex, but to score maximum points she must be accompanied by a chain-smoking male. With a packet of cigarettes and a not-too-efficient lighter he can be practically certain of distracting every performer on the stage at least once during the evening. But if he rises to a bubbling pipe and a series of blinding matches of course he rates higher (and there is bound to be someone to back him up with a smoke-engendered cough).

But none of these people, skilled as they are, really outshines the Expert Explainer. While a latecomer or a chewer may achieve success almost by accident, the continuous commentator needs months or even years of study and certain definite physical qualifications. The latter include infallibly audible voice production, several extra layers of skin and a neck sufficiently flexible to permit universal movement. They generally add up—why, I don't know—to a lady of middle or later years often with a deaf or extremely resigned companion.

On the intellectual side her curriculum is formidable. Not only must she have at least a superficial grasp of the play she is watching, be familiar with its earlier history of success or failure and able with authority to compare standards of production; she must also have an intimate (though not necessarily accurate) knowledge of everyone taking part, their achievements, characteristics, hobbies and personal relationships one to the other. Given all this, our vocal spectator can positively guarantee to wreck any production, serious or comic. Tragedy and drama have the advantage, offering plenty of scope for



... wrapped tightly in tinfoil or unyielding cellophane

clever anticipation of the plot and plenty of silences just asking to be filled.

Once I witnessed a star performance in the latter art. Playing a very long, exacting and (I hope) heart-rending part, I was at one point enjoying the rare privilege of occupying the stage alone for nearly four minutes. Silence and attention were gratifyingly complete, and I started my last slow walk across a darkened stage. That was the moment when a clear, controlled but penetrating whisper announced "Isn't she thin!"

On other occasions the odd, pungent comment has been replaced by a continuous mutter, rising to peaks of irritation. Actors and actresses have been wrenched back to reality time after time by loud reminders that "She's married to him actually, you know"; swung into entirely different productions by assertions that "He was much better as the murderer in *Gaslight*"; and rendered completely superfluous by the information that "The telephone will ring in a minute—the police!"

All that can be said in favour of this lady menace is that she instantly unites the remainder of the audience into a sympathetic entity, determined to reveal its own superior judgment and breeding.

No playgoer need despair, however, if the attainments of this inner circle are beyond him, for the potentialities of an audience in less spectacular fields are virtually endless. On one hand we have the regulars, including the coughers, programme rustlers, fidgets, yawners and grunters of both sexes; the ladies with headgear or hair-do of abnormal proportions who produce a brood of neck-craning neighbours; the gentlemen who rise mid-scene to remove obstreperous overcoats; the children—



... faints dramatically as far as possible from the emergency exit

bless them!—who rock their seats back and forth or tap little feet in a rhythmic tattoo for hours on end.

More enterprising, though, are the accidental crisis-precipitators, like the gargantuan sneezer or the careless creature who faints dramatically as far as possible from the emergency exit, the fond mamma who develops hysterics when her darling appears in unpleasant guise, or the driver whose haphazard parking demands a relentless police raid. Best of all, perhaps, is the matey group of rival amateurs, bent on picking the brains of producer and players. With scripts, notebooks, pencils and a single electric torch they can create a situation quite beyond the control of the house staff.

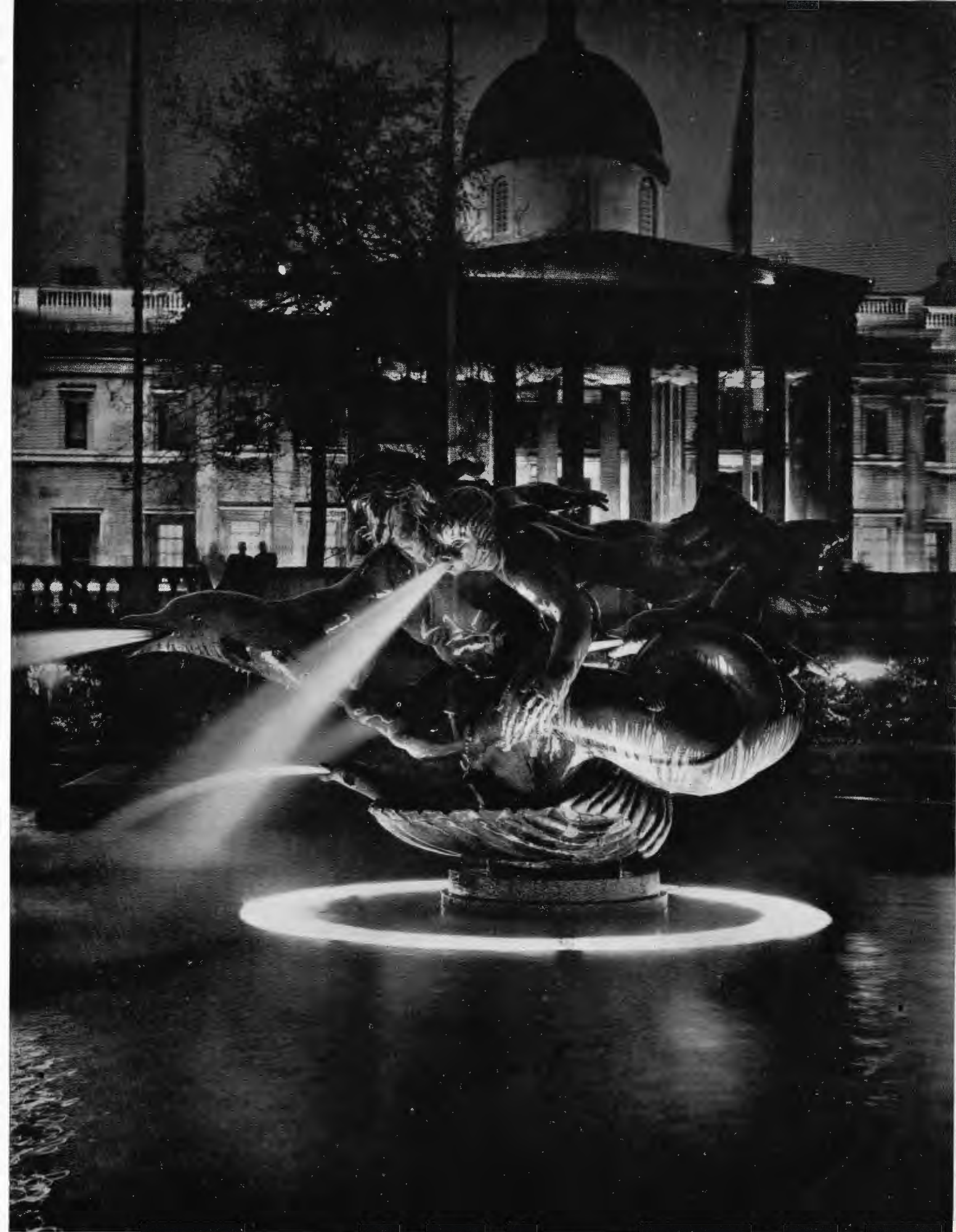
Although the temptation to snarl recriminations from the stage has been almost irresistible at times, my more balanced judgment tells me that little or none of this is deliberate. Since they pay for the privilege of watching us, it can hardly be that our friends really wish to reduce the performance to a mere battle of wills between two opposing forces.

No, all my evidence leads me rather to the conclusion that a large proportion of all audiences suffers from a curious delusion. This is that anyone on the far side of the proscenium arch is blind and deaf to all but the immediate stage surroundings, or sheltered by the miraculous cocoon which protects cinema or television stars. Perhaps after all it would be better not to damage such a faith, but to teach ourselves instead to regard it as a tribute to our art. We do not, after all, want to flatter our audience into believing that they actually affect our performance!



"Isn't she thin!"





*"Trafalgar Square"*

*Photo by Miss F. E. Atkins (Head Office)*



# The Editor's Postbag

*Readers are asked to help make a success of this Correspondence Supplement and send letters for publication to the Editor before the 15th of the month. Letters should be of general interest, non-political, and as brief as possible. They should not deal with subjects for which there is special machinery for dealing elsewhere, such as trade union matters or matters which should properly be dealt with in Works Council.*

## In Defence of the Dilettante

Sir,

Mr. Dell states that the dilettante is as much a menace as the narrow specialist, and he goes on to say that we can have no Leonardos these days. Although these two statements contain much truth, it is my contention that Mr. Dell inadequately explores their implications.

In the first place it is unfortunate that the word "dilettante" is used in the sense of "dabbler," because in the original and main sense of the word it is certainly true that the dilettante is not at all a menace; rather, in fact, the contrary. The dilettante is a most desirable person to be.

He submits himself in some measure to the majority of disciplines in knowledge and thought and can think fluently in most aspects of human experience. He is able to some extent to meet experts on their own ground and is not completely at the mercy of their pontifications.

In the world as it is lived outside universities any issue has many aspects to it, and each aspect will have an expert with a pronouncement to utter. The dilettante is admirably suited to pass judgment on the issue as a whole because it is only he who can adequately assess and synthesise the opinions of the experts. Experts themselves are usually useless for this all-important operation.

All this is not to deny the value of specialists. The dilettanti are the

audience of the specialist: they attend his lectures, read his books, appreciate his conversation and generally provide him with the physical and psychic necessities of human life. It is just because the arts student approaches more nearly the ideal state of the dilettante that he is more self-conscious about methods and is liable to be successful in administrative deliberations and commercial decisions.

Although it is true that Leonardos are nowadays impossible of realisation, nevertheless there is no reason why a lesser breed should not exist which strives after "Leonardism" even if never quite attaining it. Such a type is of course the dilettante.

A. R. M. BROWN

Overseas Sales Department  
Dyestuffs Division

### Arts versus Science

Sir,

While agreeing with much that Mr. Edmund Dell has written, I would like to join issue with him over his contention that the arts student will always have an initial advantage (over the science student) in the role of administrator.

In the past our country's natural leaders were mainly the product of our public schools, many of them subsequently going to Oxford or Cambridge. Traditionally these men studied the humanities—simply because these were then the only subjects available for continued study.

Until at most a hundred years ago the sciences were not taught save only as techniques. The advances of the twentieth century, and particularly of the past twenty years, have turned science, in the broader sense, from an empirical to a deductive study; so much so that high intelligence and hard application are needed to reach even a normal pass standard at university. Would Mr. Dell claim the same for the humanities?

Excluding the long-haired poet and the short-sighted boffin—both of little interest to industry as leaders—let us consider the more normal type in either case. The ability to lead men in industry or in any walk of life is a matter of character, and it is only indirectly associated with subjects studied. The training for responsibility and character development, which have been the main aim of our public schools and older universities, have not been obtained by the study of any particular group of subjects.

Against a background designed primarily to develop character, the humanities have been used as an instrument for mental development. In the same setting modern scientific studies would do as well. No one, I think, would seriously contend that mathematics and modern physics are in any way inferior to the classics as providers of mental gymnastics.

All this is not to deny that the majority of present-day scientific graduates are little more than technicians. Although they have enrolled



as members of a university they have not had a university training; most of them have merely continued the scientific studies of their schooldays in the narrow surroundings of a technical college. Frequently, too, their years of study have been spent in contact with inferior teachers and in surroundings not conducive to character development. The sheer pressure of work needed to master their bulging syllabus compels concentration to the exclusion of other interests (latent in scientists as in humanists).

E. J. TIMLIN  
Gloucester House  
Park Lane, London, W.1

### Treetops Hotel

Sir,  
Thank you for the excellent reproduction of my photographs. I never thought they would come out quite so well.

I am sorry that Mr. Perry went to bed, as there were rhinoceros by the pool practically all night. At one time seven stayed for over an hour, and it was difficult to distinguish between their snorts and grunts of satisfaction, as they turned up the lick, and the sounds of the snoring guests who had gone to bed!

About a week after I returned I had a letter from my sister in Nairobi, and she told me that an announcement had been made in the local press stating that nobody over 50 years of age—in fact only people fit and agile enough to climb ladders quickly—is to be allowed to go to Treetops for the time being, as the animals are rampant. Also anyone who goes at all goes at his or her own risk!

In conclusion, may I correct an erroneous impression given in the introduction, where it is stated that the charge for one person per night is 225s. This charge is made only if a single person requires solitude. There is accommodation for ten persons, and the price is worked on a sliding scale according to the size of the

party. On the night I visited Treetops we had a full house, and the price charged per person was 70s. inclusive of all meals and transport from the Outspan Hotel to and from Treetops, a distance of some ten miles.

M. E. PETLEY  
Nobel House  
London, S.W.1

### Melbourne Settlers' Club

Sir,

I have been reading the letter in your Postbag by Mr. P. O. Spicer, regarding people who are contemplating emigration to Melbourne. May I mention that a club is now formed for new settlers from Northern Ireland and the United Kingdom. A welcome awaits them all, and the meeting place is No. 2 Room, Temperance Hall, Savoy Theatre Buildings, Russell Street, Melbourne, C.1. The secretary's address is No. 88 Glyndon Road, Camberwell, E.6, Victoria (Mr. Couzer).

I wish your magazine continued success.

JAMES GLYNN  
54 Powlett Street  
East Melbourne, C.2  
Victoria, Australia

### Saturday Work

Sir,

This country is incapable of supporting the population at the high standard of living that was enjoyed by the people just prior to the last war. So we are told by the economists, and this would appear to be so.

This difficulty might, I suppose, be overcome permanently by cutting down the population to a figure which could be supported at a high standard of living.

The only other alternative is to step up production to a much higher level.

Saturday mornings provide an unwanted and unneeded holiday which thousands of men and women would be only too pleased to use in helping to get this country into a more stable position. There must be things that a Saturday organisation can do for

reasonable payment, without complications of income tax, etc. There are various employers' and employees' organisations in Welwyn Garden City, so why cannot we set an example for the rest of the country to follow?

TEMPUS FUGIT  
Technical Department  
Plastics Division

### Bowls in the Past

Sir,

Many, many congratulations for the excellent article entitled "Bowls in the Past" printed in the August *Magazine*. As a bowler and captain of the Plymouth Sir Francis Drake Bowling Club I consider it most interesting and educational; it is my intention to give it a prominent position in the club premises.

HAROLD W. SANDERS  
Veteran, Paints Division  
Slough

### An I.C.I. Philatelic Society?

Sir,

In view of the fact that there appears to be a definite increase in the number of philatelists among the members of this Company, whose branches are so well known throughout the world, surely now would be an excellent opportunity for those interested to form a philatelic society within the Company, open to all employees, with a view to exchanging ideas and duplicates.

I understand such a society existed in I.C.I. before the war.

M. B. BACKHOUSE  
M.S. Factory, Randle  
General Chemicals Division

### Why not a Tattoo?

Sir,

I was interested to see the two letters in the August Postbag suggesting two means of identification for I.C.I. employees—an I.C.I. badge and an I.C.I. tie. As badges get lost and ties wear out, might I suggest that we are all tattooed and have done with it.

R. J. GARDNER  
Central Publicity Department